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TWELFTH ANNUAL REPORT

ON //
VOCATIONAL EDUCATION

IN
MASSACHUSETTS

1980-1981

GOVERNMENT DOCUMENTS
COLLECTION

MAY 28 1982

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PREPARED BY
THE MASSACHUSETTS ADVISORY COUNCIL
ON
VOCATIONAL-TECHNICAL EDUCATION

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DECEMBER, 1981

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Dr. Donald R. Walker, Chair
Massachusetts Board of Education
31 St. James Avenue
Boston, Massachusetts 02116

Dear Dr. Walker:

The Massachusetts Advisory Council on Vocational-Technical Education is required, under Section 105 of Public Law 94-482, to prepare an annual report outlining the Council's assessment of the degree to which the vocational education system is meeting the needs of the Commonwealth's citizens, and to make recommendations for change, where appropriate. This Annual Report is addressed to the Board of Education, which must then submit it to the U.S. Department of Education, together with the Board's responses to the State Council's recommendations.

The Council is pleased to present its Twelfth Annual Report, covering the (federal) fiscal year 1981. The Council appreciates the excellent working relationship we have with your Board and with the staff of the Division of Occupational Education. We hope that our Report and recommendations will assist the Board in its efforts to strengthen the quality of vocational education in Massachusetts.

Respectfully submitted
for the Council,

Lillie A. Davis

Lillie A. Davis
Chair

PREFACE

This twelfth Annual Report of the Massachusetts Advisory Council on Vocational-Technical Education is derived from the Council's activities during 1981. The comments and recommendations contained in this Report represent the collective opinions and judgments of the Council, whose members have been selected by the Governor to represent the views of all citizens of the Commonwealth. The Council wishes to thank the Associate Commissioner of Occupational Education and his staff for their continuing cooperation. The Council recognizes that many of the constructive activities undertaken by the Division are not mentioned, as the Council focuses on identifying problem areas, but it should be understood that the Council fully supports the Division and is cognizant of the financial and staff limitations with which the Division must cope in this time of fiscal austerity.

Vocational education in Massachusetts has a long history of leadership and innovation, of which its practitioners may be justifiably proud. The Commonwealth's vocational education system is being asked to help meet the challenges presented by social, economic, technological and demographic changes requiring new priorities and new programs, along with the elimination of outmoded programs. Vocational educators alone cannot solve all of society's problems, nor are they asked to do so. What they are asked to do is assume a leadership role in collaboration with business, labor and the public sector in offering all citizens of the Commonwealth equal access to quality vocational education relevant to the current and emerging realities of the economic world.

The primary concern of the Advisory Council is to advocate and promote better vocational and technical education for the Commonwealth's population. Advisory Council responsibilities include:

LISTENING: to the expression of local ideas and concerns relating to vocational education presented to the Advisory Council by interested individuals and groups.

ADVISING: the State Board of Education on the development of the State Plan and any policy matters arising in the administration of the State Plan.

EVALUATING: the effectiveness and accomplishments of vocational education programs at the state and local levels, in terms of the goals and objectives contained in the State Plan.

RECOMMENDING: changes in programs, services, and activities as may be warranted by the evaluation.

REPORTING: on the effectiveness of the Commonwealth's vocational education programs, services, and activities, via an Annual Report, which is submitted to the U.S. Commissioner of Education and the National Advisory Council on Vocational Education.

PROVIDING: technical assistance, as resources allow, to local education agencies, interested groups, and individuals who may request assistance in establishing and operating local advisory councils.

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EXECUTIVE SUMMARY

1981 Annual Report of the Massachusetts Advisory Council on Vocational-Technical Education

Introduction

The 1981 Annual Report of the Massachusetts Advisory Council on Vocational-Technical Education (the Council) describes activities undertaken by the Council during the school year 1980-81, pursuant to its mandate under Public Law 94-482, the Education Amendments of 1976. The Report also presents recommendations pertaining to the planning, evaluation, administration and delivery of occupational/vocational education programs and services in the Commonwealth of Massachusetts.

The Report is based on Council observations, information distributed by the Division of Occupational Education and other state governmental agencies, concerns expressed by citizens at public meetings, discussions with educators, contractual studies commissioned by the Council and on research conducted by the Council staff.

A. Planning and Evaluation

Despite notable refinement of the planning process since 1978, particularly at the local level, the State Plan still lacks a coherent, comprehensive statement of where the vocational education enterprise in Massachusetts currently stands, where it intends to go, and how it intends to get there. The Five Year Plan's goals are too general to be of much operational value or to be evaluated; the Annual Plans have been largely incomprehensible, both to the general public and to local education agencies; and they have not been clearly linked to updates of the Commonwealth's needs, based on current data and results of program evaluations. The fact is that, in the Council's judgement, the State Plan for Vocational Education in Massachusetts is not really a "plan" at all — it still is principally a compliance document and a rule book to follow when applying for federal funds.

As for evaluation of progress toward goals set forth in the Five Year and Annual State Plans, theoretically, the Council (and any other interested party) should be able to turn to the Annual Accountability Report required under P.L. 94-482 for relevant data and discussion. As the Council repeatedly has pointed out, however, the Accountability Report has proved virtually useless in this regard. The most recent Accountability Report (for Fiscal Year 1980) makes the statement that "The general goals of the Massachusetts Annual and Five Year State Plan were adequately addressed during Fiscal Year 1980." The Council cannot agree or disagree with this statement because neither the goals nor the evidence for claiming to have met them are presented in sufficient detail to permit independent verification.

With these criticisms, however, it is important to insert three qualifying observations. *First*, although the Council continues to be critical of the State Plan, it does recognize that the Associate Commissioner for Occupational Education and his staff have taken productive steps to improve the planning process; the document we now have is a decided improvement over the one produced five years ago. In particular, THE COUNCIL COMMENDS THE DIVISION OF OCCUPATIONAL EDUCATION FOR THOSE SECTIONS OF THE FY1981 ANNUAL PROGRAM PLAN CONCERNING LOCAL PLANNING, LOCAL LABOR MARKET INFORMATION, CETA/VOCATIONAL EDUCATION COORDINATION, AND PLANS FOR EVALUATION.

Second, as the Council has noted in its previous Reports, some of the blame for the State Plan must be attributed to a poorly drafted federal law, leading to technical, often self-defeating regulations and policy interpretations from Washington, and to a "check-list" compliance stance on the part of the U.S. Department of Education. These factors combine to dissipate the creative energies of state planners nationwide. Many states find themselves negotiating over plan minutiae well beyond the starting date for programs; and the process for gaining plan approval in Washington is so arduous that the perpetuation of a compliance document mind-set is all but inevitable.

Third, despite the imperfections of the Commonwealth's formal planning and reporting process, the Council is confident that overall progress is being made and that federal funds under P.L. 94-482 have made a difference.

THE DIVISION OF OCCUPATIONAL EDUCATION HAS MADE SIGNIFICANT PROGRESS TOWARD DEVELOPING A MODEL EVALUATION INSTRUMENT AND PROCESS, both of which are still being field-tested, for state and federally funded vocational educational programs.

The evaluation instrument currently being field-tested is exemplary. One standardized form now will be used in all regional offices of the Department of Education (whereas in the past, each region had its own instrument and those instruments were of uneven quality); one form will be used for both federal and state funded programs; and there is provision for student input to the evaluation. Although the newly developed instrument and process theoretically will enable the Division to evaluate 20% of all vocational education programs each year, this goal may not be attainable with the present staff complement. The Council previously has noted that the Division is hindered in its evaluation of programs by inadequate staff and resources. Recent cutbacks of both federal and state funding have resulted in a hiring freeze that has seriously eroded the Division's operational capacity.

The Council is aware that any evaluation of vocational education is incomplete without information on students' postgraduate employment experiences. But the limited information currently available on students' expected placement status is not sufficient for evaluating whether vocational education programs adequately prepare students to compete successfully in the labor market. Due to these data limitations, little can be said about the employment experiences of vocational education graduates and, as a consequence, the evaluation process is severely limited.

The Division of Occupational Education does not appear to be addressing the essential question of whether vocational education in general is worth the additional cost. Nor is there much evidence that student placements and wage experiences are the primary criteria for deciding which programs in Massachusetts should be added, dropped or expanded. The Council does not believe, however, that these findings indicate lack of interest on the part of the Division. The Division has limited power in deciding what programs are offered at the local level, and does not have enough staff to generate sophisticated research studies. Moreover, the research, data gathering and evaluation personnel available must handle the often conflicting demands of national reporting, evaluation to improve programs at the local level, and evaluation to satisfy state law.

The Council's major concern about the State's evaluation process is that the process should help LEAs decide which programs work and which do not, which programs should be retained and which dropped. The often quoted question of whether vocational education graduates enjoy a net long-term monetary gain compared to non-vocational graduates is worth investigation, but is not the sole determinant of vocational education's value. For while vocational education does have an effect on a graduate's employment and wage experience, it is *education* we are talking about and not simply skills training.

B. Distribution of Federal Funds

The planned distribution of federal funds for Fiscal Year 1981 is set forth on page 17 of the *Massachusetts Plan for Vocational Education for Fiscal Years 1981 and 1982*. The Council concludes, based on a review of the 1981 State Plan and the 1980 Accountability Report, that Massachusetts has complied with the intent of federal regulations for distribution of such funds.

The most significant development in 1981 was the substantial recission of the 1982 federal grant award to Massachusetts (appropriated in 1981), which disrupted planning already underway. Additional cuts in the 1983 federal grant award are virtually a certainty.

C. Coordination of Vocational Education with other Employment and Training Programs in Massachusetts

The Commonwealth of Massachusetts has made tremendous strides within the past five years toward the development of a coordinated system of planning for the delivery of vocational education and employment and training services designed to meet the needs of residents of the State. The days when the development of the State Plan for Vocational Education and other "manpower" program planning occurred completely separately from each other appear to have gone — and happily so. While there still are occasional problems when agency "turf rights" obstruct the sharing of ideas and information between agencies, or when duplication of effort occurs, the Council is pleased to report that, on the whole, coordination and cooperation between agencies is the rule rather than the exception.

Major credit for this steady progress toward interagency coordination and cooperation must be given to the Department of Education and to the State Employment and Training Council. Their joint effort several years ago in developing the State's Youth Employment Policy and the subsequent Youth Action Plan led to the realization by other state agencies that the sharing of ideas and the pooling of expertise and resources can provide mutual benefits, if the parties involved are willing to work together to achieve common goals and objectives. Perhaps more important is the fact that, within the past two years, the example of interagency cooperation at the state level has begun to "trickle down" to the local level. This bodes well for the future since the decreasing availability of federal funds will necessitate that state and local agency personnel work ever more closely together to share their scarce resources and to coordinate their program planning and service delivery.

D. Public Meeting and Boston

The Advisory Council held a public meeting on May 12, 1981 for the purpose of providing an opportunity for vocational educators, business and labor, the general public, parents and students to comment on the vocational education delivery system in Massachusetts.

The meeting was held at the Hubert H. Humphrey Occupational Resource Center (the ORC) in Boston. Located adjacent to Madison Park High School, the Humphrey ORC is a new, 35 million dollar facility offering programs in nine occupational clusters to all public high school students in Boston. Students generally take a half day of academic study at their "home" high schools and are bused to the ORC for a half day of skills training. Highly touted as the driving force behind what was to be Boston's new commitment to quality vocational education, the ORC was ten years in moving from the design stage to construction. Unfortunately, the opening of the facility occurred in the midst of a severe budget squeeze on education in general and on Boston in particular, and the ORC has had to contend not only with the normal problems any new school facility would face, but also with teacher layoffs, declining enrollments, court orders to correct racial imbalance among both students and staff, and budget cutbacks.

Thus, when the Council held its public meeting at the ORC (which, coincidentally, took place shortly after the majority of teachers at the facility had received lay-off notices), there was extensive testimony from ORC personnel on issues pertaining solely to the Center and/or to Boston, in addition to more generalized comments from people outside the Boston area about vocational education statewide. The remarks that appear below under the heading "Boston Concerns" should be understood as pertaining to Boston (and, more specifically, to the ORC), but not necessarily to vocational education elsewhere in the Commonwealth. Comments relative to the latter are subsumed under "General Concerns."

- **Boston Concerns**

Five themes were heard from ORC staff, as follows:

1. Too much of the administration of the Center is in the hands of "academics." Consequently, programs, curriculum and the admissions policy are not in tune with vocational education needs.
2. The half day program ($\frac{1}{2}$ day spent on academic subjects at the sending schools, $\frac{1}{2}$ day spent on vocational education at the ORC) does not seem to be working well.
3. Certification requirements have been waived for many of the Center's administrative and instructional staff, putting the Center into non-compliance with accepted certification practices.
4. The building was opened prematurely, to meet a timetable, but was not really ready for students. Much of the equipment that was ordered still has not been delivered and/or is not in place in the shops.
5. With over $\frac{1}{3}$ of the student population having "special needs," the staff should have training that will better enable them to meet those needs.

- **General Concerns**

1. Consumer and homemaking programs do not receive adequate state or federal support.
2. Field offices of the Division of Occupational Education should be staffed with specialists in program areas: the present "generalist" approach, under which state personnel are presumed to be knowledgeable about all program areas, does not work and does not assist LEAs in keeping current with labor market and technological changes.
3. Since the number of students enrolled in vocational programs in comprehensive high schools far exceeds the number enrolled in vocational schools, the current allocation method for federal funds should be continued, because it gives all LEAs the opportunity to access these funds.
4. It is imperative that business education, industrial arts and home economics be entitled to weighted state reimbursement rather than being treated as equal to "general education."
5. Proposition 2 $\frac{1}{2}$ (recently enacted tax reduction legislation) will reduce school budgets and, therefore, program options in comprehensive high schools. The State should address the necessity of modifying state mandates pertaining to "approved" vocational programs and required subjects, in order for students to access vocational offerings in comprehensive schools.

E. Status of Local Advisory Councils

The Division of Occupational Education reports that Massachusetts had 300 local advisory councils for vocational education during 1981. The 2,500 citizens of the Commonwealth serving on such councils included 150 handicapped persons, 150 racial and linguistic minorities, 175 students, 275 parents, 350 labor representatives,

400 persons from local industry, 500 from other business areas, 500 educators, 125 representatives of community agencies, and 700 females. Although it may be argued that the statewide totals of representation in each category do not meet the implied requirements of Section 104.111 of the Regulations for P.L. 94-482, there can be no doubt that there is a mechanism in place for advising LEAs on the relevancy of programs to local labor market needs.

F. Comments on the Report of the State Employment and Training Council

At this writing, the FY1981 Annual Report of the State Employment and Training Council was still in the early stages of preparation and was not scheduled for publication before February, 1982.

A year ago, this Advisory Council commented on the SETC's FY1980 Annual Report and we do not intend to repeat those comments. But the Council does wish to reiterate its endorsement of the SETC's position on the future of the employment and training system in these days of shifting federal priorities, and particularly in light of the pending debates on the reauthorization of the Vocational Education Act and the Comprehensive Employment and Training Act. The Advisory Council shares the SETC's view that Congress should re-examine these two pieces of legislation in tandem, and that future legislation should be designed to enhance greater participation by and coordination with the business sector, educational agencies and community-based organizations in the planning, design and delivery of services.

G. Status of the Massachusetts Occupational Information Coordinating Committee

During FY1981, the Massachusetts Occupational Information Coordinating Committee (MOICC), under new staff leadership, has maintained the forward momentum built up during the previous year and has provided even closer coordination than before in the collection, analysis and dissemination of occupational information so vital to vocational education and employment and training program administrators and planners.

At this writing, the future of the MOICC beyond the end of FY1982 appears uncertain, in the light of current federal cuts and possible changes in the authorizing legislation. After a slow start, the MOICC has grown within the past two years into a positive force for promoting coordination of the data collection and dissemination activities of those state agencies responsible for the planning and delivery of vocational education and employment and training services to residents of this Commonwealth. The Advisory Council believes that this coordinating function is essential, and strongly recommends that the agencies involved begin now to make plans for continuing this vital clearinghouse activity in some form, even if federal funding for the MOICC should end.

H. Vocational Agriculture

Although Massachusetts is a highly industrialized state, and certainly is not suitable for large-scale farming, nonetheless *the Council finds evidence to support the premise that the Commonwealth needs to increase its investments in vocational agriculture programs.* Vocational agriculture (or vocational education in agriculture) refers to organized instructional programs in agriculture/agribusiness at the high school level that prepares students for occupations in agricultural production; agricultural supplies and services; agricultural mechanics; agricultural products, processing and marketing; horticulture; renewable natural resources; forestry; and others. Only those programs which qualify for assistance under federal vocational legislation are considered vocational agriculture programs. There currently are nineteen (19) such programs in Massachusetts.

According to projections from 1970 census data, the total number of full-time workers using agricultural/agribusiness competencies in their primary occupation in Massachusetts was approximately 60,000 in 1975. This figure accounted for 2.6% of

the total number employed in all industries in Massachusetts in 1975. The time has come for the Commonwealth to increase its investments in agricultural technology and in the human resources which will develop, adapt and productively use this technology. To respond to this challenge, the school-age population will need to have greater access to high quality vocational education programs in agriculture than it currently has, because the number of vocational agriculture program graduates from Massachusetts schools each year continues to fall far short of the quantity needed by the Bay State's agricultural businesses and industries.

The delivery system for agricultural vocational education in Massachusetts has deteriorated badly during the past decade. Both quantitative and qualitative repairs are needed to strengthen the system and provide the high quality programs needed by the Commonwealth's aspiring future agriculturalists.

I. Equal Access to Vocational Education

The Council has a long-standing concern with equality of access to vocational education, especially for racial and linguistic minorities, women and handicapped students. In its 1980 Annual Report the Council identified the major issues. During 1981, the Council began to address the question of how needed change will evolve, given a current contracting economy and a climate of "taxpayer revolt." Specifically, if resources for public schools are diminishing, is it still reasonable to expect the schools to radically upgrade, expand or alter their vocational education programs? As a first step in answering this question, the Council undertook a supply/demand study of vocational programs in Massachusetts, with a view to determining if the needs of *all* students who desire and seek such training are being adequately met by the existing education system. This study is ongoing and should be completed in 1982. The aggregate data attained thus far will be refined by sex, race/ethnicity and handicap. Random samples of students will be interviewed to gain further understanding of:

- (1) the kinds and sources of counseling they are receiving;
- (2) their perceptions of what the "high demand" occupations are;
- (3) the significant influences on their choices of vocational programs; and
- (4) their perceptions of the quality of vocational education they are receiving.

During 1981, the Council also undertook a study of the effectiveness of the Vocational Education Act (P.L. 94-482) from the perspective of Hispanic and other minority women. The preliminary results of this study, which will be concluded in 1982, show that in Massachusetts there is inadequate representation of women in general, more so of minority women and even more so of Hispanic women, in the planning process, staffing patterns and student distribution in vocational education programs.

The Council repeats a point made in its 1980 Report: despite the fact that one out of two women today will more than likely spend a portion of her life working for pay, there are few courses or programs designed to help junior high and high school-age girls understand why it is important for them to think ahead about preparation for continued training and long-term commitment which would lead to advanced status in the labor force at higher wages. The public schools need to begin developing ways which make outreach and counseling part of the mainstream of the teaching/learning process, at the secondary and postsecondary levels. We need to find ways to help girls and young women broaden their career perspectives, not only to give them information, but also to give them the motivation and desire to risk breaking out of stereotyped occupational roles. Part of this process, especially at the junior high school level where parents still have a great impact on their children's goals and aspirations, is to find ways to acquaint parents with the facts about trends in work and family, and the need for career planning for girls.

J. Postsecondary Vocational Education

As it seeks the opinions of the representatives of the postsecondary vocational education system in Massachusetts (primarily community colleges), the Council consistently hears three themes. The *first* is that if the State's economic development potential consists largely of sophisticated technical industries and services requiring highly skilled workers, then more vocational education dollar resources should be directed to postsecondary programs. *Second*, sophisticated technical programs at the postsecondary level require solid preparation at the secondary level, both in academic and in generalized occupational skills. *Third*, both the state budget process and the allocation formula for federal vocational education monies need to be rethought as they affect postsecondary programs.

Federal funds *have* made a difference and have been an essential source of "seed money" for new programs and equipment in postsecondary education in Massachusetts. This is especially true for the more expensive programs in health, technical, and trade and industrial occupations, which must meet both increasing demand and rapid technological change. At Springfield Technical Community College, for example, programs launched with federal funds currently make up 50% of the total technology program offerings.

It is time to re-evaluate the amount of federal funds directed to postsecondary education in Massachusetts and the process of awarding grants. With the "baby boom" over, at least as much attention should be given to the adult learner as has been focused in the past on the high school student. Students in postsecondary programs represent one of the best investments in human capital it is possible to make with public funds: such students tend to be older, already working while going to school part-time, concerned primarily about career opportunities, and highly motivated. Economically disadvantaged women, minorities and handicapped individuals are well represented in this group. And net annual costs per student can run substantially below comparable costs in secondary education.

K. Reauthorization of the Vocational Education Act

Chapter III of this Report is the Council's position paper on reauthorization of the federal Vocational Education Act (P.L. 94-482). The Council's recommendations concerning any new legislation assume that vocational education is and should remain a decentralized system, subject to local (i.e., local education agency) control based on local needs. If the vocational education enterprise is to receive federal support, however, it must be able to demonstrate that it is helping to solve national problems of poverty, unemployment and underemployment; lack of equitable access to training and jobs; unequal educational opportunity; chronic inflation, and declining productivity. Therefore, the role of the federal government should be to provide incentives for local and state vocational education agencies to go beyond traditional courses and delivery systems in addressing national priorities.

The following goals should undergird the federal role in vocational education: a) eliminating discrimination because of race, sex, handicap or limited English language proficiency; b) reducing inter-state and intra-state disparities in financial ability to support quality education; c) protecting the rights of state and local governments, and public and private institutions, in the areas of educational policy and administration of programs; d) meeting industrial modernization needs; and e) providing the skilled labor force required to mount a major defensive effort in a national emergency.

L. Summary of Recommendations

The following recommendations are grouped by subject for convenience of discussion; the order of listing is *not* intended to suggest priorities.

Planning and Evaluation (Chapter 1A & B)

1. THAT THE NEW FIVE-YEAR PLAN INCLUDE MORE EXPLICIT GOALS AND OBJECTIVES.
2. THAT THE NEW FIVE-YEAR PLAN INCLUDE MORE SPECIFIC LANGUAGE DETAILING THE MONITORING AND EVALUATION EFFORTS THE DIVISION OF OCCUPATIONAL EDUCATION WILL UNDERTAKE TO MEASURE PROGRESS TOWARD STATE PLAN GOALS.

Note: See Chapter III for the Council's recommendations concerning the planning provisions of federal vocational education legislation.

3. THAT THE DIVISION OF OCCUPATIONAL EDUCATION SELECT FOR EVALUATION TEAMS ONLY PEOPLE PROFESSIONALLY QUALIFIED IN THE OCCUPATIONAL AREAS BEING EVALUATED, AND THAT SUCH EVALUATORS RECEIVE THOROUGH TRAINING IN THE EVALUATION PROCESS BEING IMPLEMENTED.

Boston (Chapter 1E)

4. THAT THE BOSTON SCHOOL COMMITTEE COMBINE MADISON PARK HIGH SCHOOL AND THE HUBERT H. HUMPHREY OCCUPATIONAL RESOURCE CENTER IN A COMPREHENSIVE HIGH SCHOOL FACILITY OFFERING ACADEMIC AND VOCATIONAL EDUCATION ON A WEEK-IN, WEEK-OUT BASIS.

Agricultural Vocational Education (Chapter 11A)

5. THAT THE DIVISION OF OCCUPATIONAL EDUCATION IMMEDIATELY HIRE A WELL-QUALIFIED SPECIALIST TO SERVE, ON A FULL-TIME BASIS, AS A STATE SUPERVISOR/CONSULTANT IN AGRICULTURAL EDUCATION, AND ALSO TO SERVE TEMPORARILY AS THE STATE FFA EXECUTIVE SECRETARY UNTIL SATISFACTORY ADMINISTRATIVE ARRANGEMENTS CAN BE MADE TO STAFF THE STATE FFA POSITION.
6. THAT THE DIVISION OF OCCUPATIONAL EDUCATION FUND A SPECIAL COMMISSION TO INVESTIGATE THE AVAILABILITY AND ACCESSIBILITY OF COMPREHENSIVE PROGRAMS OF VOCATIONAL AGRICULTURE TO THE SCHOOL-AGE-POPULATION.
7. THAT THE DIVISION OF OCCUPATIONAL EDUCATION CONDUCT AN IN-DEPTH STUDY OF THE QUALITATIVE STANDARDS OF VOCATIONAL AGRICULTURE PROGRAMS IN MASSACHUSETTS, MAKE COMPARISONS WITH THOSE STANDARDS SUGGESTED BY THE FEDERALLY FUNDED PROJECT ENTITLED "STANDARDS FOR QUALITY PROGRAMS IN VOCATIONAL AGRICULTURE/AGRICULTURE EDUCATION," AND DEVELOP A PLAN FOR IMPROVING THE QUALITY OF VOCATIONAL AGRICULTURE PROGRAMS IN MASSACHUSETTS.

Postsecondary Vocational Education (Chapter IID)

8. THAT THE DIVISION OF OCCUPATIONAL EDUCATION REASSESS THE FOLLOWING:
 - THE PROCESS AND CRITERIA USED IN AWARDING FUNDS;
 - COST-EFFECTIVENESS, ON A PROGRAMMATIC BASIS, OF THE DOLLARS BEING AWARDED;
 - THE ISSUE OF MORE FLEXIBILITY FOR THE GRANTEE INSTITUTION IN PROJECT ADMINISTRATION;
 - THE VALUE AND COST OF THE CURRENT REPORTING SYSTEM; AND
 - THE JUDICIOUSNESS OF MAINTAINING THE MINIMUM SETASIDE FOR POSTSECONDARY EDUCATION, PARTICULARLY GIVEN THE PERSONNEL NEEDS OF THE HIGH TECHNOLOGY INDUSTRIES OF THE COMMONWEALTH, AND OUR VITAL HEALTH CARE DELIVERY SYSTEM.

CHAPTER 1

MANDATED RESPONSIBILITIES

A. EVALUATION OF PROGRESS TOWARD ACCOMPLISHING STATE PLAN GOALS

The Council's concern with the planning process for vocational education in Massachusetts has a long history. In 1973, for example, the Council stated in its Annual Report that it was "unable to derive from the plan document any useful understanding of what the Division (of Occupational Education) is undertaking or what its goals and objectives are." Although by 1976 the Council was able to note some "modest improvement," it still was urging the State Board of Education (the Board) to give high priority to developing a comprehensive planning process. The 1976 amendments to the Federal Vocational Education Act (P.L. 94-482) went far beyond any previous federal vocational legislation by prescribing a five-year plan, an annual plan and an accountability report. The resultant Massachusetts Five Year Plan for 1978-1982 was an improvement over previous efforts and incorporated many of the Council's recommendations. The Council continued to complain, however, about the lack of specificity in the Plan's goal statements and the fact that providers at the local level were not familiar with the plan and had little to say about its content.

Despite additional refinement of the planning process since 1978, particularly at the local level, the Council has felt compelled to note repeatedly that the State Plan lacks a coherent, comprehensive statement of where the vocational education enterprise in Massachusetts currently stands, where it intends to go, and how it intends to get there. The Five Year Plan's goals are too general to be of much operational value or to be evaluated; the Annual Plans have been largely incomprehensible, both to the general public and to local education agencies; and they have not been clearly linked to updates of the Commonwealth's needs, based on current data and results of program evaluations. The fact is that, in the Council's judgement, the State Plan for Vocational Education in Massachusetts is not really a "plan" at all — it still is principally a compliance document and a rule book to follow when applying for federal funds.

As for evaluation of progress toward goals set forth in the Five Year and Annual State Plans, theoretically, the Council (and any other interested party) should be able to turn to the Annual Accountability Report required under P.L. 94-482 for relevant data and discussion. As the Council repeatedly has pointed out, however, the Accountability Report has proved virtually useless in this regard. The most recent Accountability Report (for Fiscal Year 1980) makes the statement that "The general goals of the Massachusetts Annual and Five Year State Plan were adequately addressed during Fiscal Year 1980."¹ The Council cannot agree or disagree with this statement, because neither the goals nor the evidence for claiming to have met them are presented in sufficient detail to permit independent verification. For example, Goal I under the original Five Year Plan is "to provide equal access to quality vocational education" and it establishes some rather specific enrollment objectives for disadvantaged, limited English-speaking and handicapped students.² Yet the data in the FY1980 Accountability Report which follow the assessment that Goal I has been "adequately addressed" do not include enrollment figures for these categories of students. The Council realizes that appropriate data by race, sex, ethnicity and handicap are being collected under the Vocational Education Data Systems (VEDS), but

¹*The Commonwealth of Massachusetts Annual Accountability Report for Vocational Education, Fiscal Year 1980*, p. 23.

²*Massachusetts Annual and Five Year State Plan for Vocational Education, 1978-1982*, p. 34.

the real purpose of such data is to help the states plan and should be used in the Accountability Report under a general discussion of progress toward State Plan goals. One additional example should suffice to make the point. On page 3 of the Annual Plan for FY80, there is a projection of 1980 enrollments, by race and ethnicity, from applications under P.L. 94-482. Now this is a bold projection to attempt and THE DIVISION IS TO BE COMMENDED for it. But when one looks on page 46 of the FY1980 Accountability Report, where "results achieved" with federal funds are reported, there is no racial/ethnic breakdown and no explanation of the figures that are reported.

Having said all this, however, it is important to insert three qualifying remarks. *First*, although the Council continues to be critical of the State Plan, it does recognize that the Associate Commissioner for Occupational Education and his staff have taken productive steps to improve the planning process; the document we now have is a decided improvement over the one produced five years ago. In particular, THE COUNCIL COMMENDS THE DIVISION OF OCCUPATIONAL EDUCATION FOR THOSE SECTIONS OF THE FY1981 ANNUAL PROGRAM PLAN CONCERNING LOCAL PLANNING, LOCAL LABOR MARKET INFORMATION, CETA/VOCATIONAL EDUCATION COORDINATION, AND PLANS FOR EVALUATION.

Second, as the Council has noted in its previous Reports, some of the blame for the State Plan must be attributed to a poorly drafted federal law, leading to technical, often self-defeating regulations and policy interpretations from Washington, and to a "check-list" compliance stance on the part of the U.S. Department of Education. These factors combine to dissipate the creative energies of state planners nationwide. Many states find themselves negotiating over plan minutiae well beyond the starting date for programs; and the process for gaining plan approval in Washington is so arduous that the perpetuation of a compliance document mind-set is all but inevitable.

For example, the federal requirement that expenditures and enrollments (by six-digit OE Codes) be estimated for five years into the future is a waste of time since the Division has little idea of what the federal or state contribution will be, even from year to year. In the current climate of continuing resolutions and recissions, the forward funding feature of the VEA has been disrupted and "projections" are meaningless. If five year (or three year) planning is to be mandated, then there should be multiple year funding. The states should *not* be required to do what the federal government cannot come close to doing.

Another major problem area is the formula by which states distribute funds to local recipients. The statute leaves many issues unresolved and neither the regulations nor U.S. Department of Education interpretations have shed much light. The National Institute of Education comments as follows:

The [four] factors that influence the distribution of funds that are included [in the VEA] were assembled piecemeal in 1976, with no apparent analysis of how they would interact or simulate to determine their effects when combined. Although the goals and consequences of a single factor are quite predictable, the consequences of any formula which must incorporate all four are not intuitive, and it is not clear whether the goal represented by each of the criteria is being achieved. The OVAE has never been able to judge the effectiveness of the formulas, only the effectiveness with respect to one particular measure. Consequently, their analyses have been limited to evidence of level or near-level funding patterns and comparing selected recipients. Only with the use of statistical methods can the independent effect of each variable on the resulting distribution be measured.³

³National Institute of Education, Vocational Education Study: Final Report, Washington, D.C., 1981, pp. 11-17.

There is more actual planning going on than the state plans themselves reveal. For example, the grant management system in Massachusetts has been refined and improved in several areas:

1. A new allocation formula for P.L. 94-482 funds has been developed, which takes into account the following:
 - concentration of low income individuals, as measured by recent AFDC data;
 - eligible recipient needs, measured through indices which compare the data of eligible recipients directly to statewide averages;
 - relative program costs, using additional or weighted counting of pupils enrolled in multiyear, intensive job skills training programs;
 - differences in the distribution of underserved groups, through the utilization of separate enrollment information for handicapped, postsecondary and adult, and dropout student populations, and;
 - minimum allocations for most funding categories, to assure that funded programs are large enough to have measurable impact.
2. The planning cycle has been accelerated; the majority of P.L. 94-482 grants to be approved now go to the State Board of Education in April, May and June.
3. Information from applications, as approved, is being computerized so that the Board will have a better idea of the current status of the total grant picture at any point in the planning cycle. The Division also will have improved monitoring controls.
4. The paperwork burden on LEAs has been reduced; the flow of grant funds has been accelerated and made more predictable; and the Division's internal operation is more efficient.

Third, despite the imperfections of the Commonwealth's formal planning and reporting process, the Council is confident that overall progress is being made and that federal funds under P.L. 94-482 have made a difference. Some of the reasons for this conclusion will be evident in the following pages.

RECOMMENDATIONS

1. THAT THE NEW FIVE-YEAR PLAN INCLUDE MORE EXPLICIT GOALS AND OBJECTIVES.
2. THAT THE NEW FIVE-YEAR PLAN INCLUDE MORE SPECIFIC LANGUAGE DETAILING THE MONITORING AND EVALUATION EFFORTS THE DIVISION OF OCCUPATIONAL EDUCATION WILL UNDERTAKE TO MEASURE PROGRESS TOWARD STATE PLAN GOALS.

Note: See Chapter III for the Council's recommendations concerning the planning provisions of federal vocational education legislation.

B. A REVIEW OF THE STATE'S EVALUATION OF VOCATIONAL EDUCATION PROGRAMS OPERATED BY LOCAL EDUCATION AGENCIES AND OTHER RECIPIENTS OF FEDERAL FUNDS.

Public Law 94-482 requires the State Advisory Council to review the State's evaluation process for vocational education. The Council's position is that this requirement is met most effectively by the Council and the Division of Occupational Education working together to develop an overall plan to evaluate programs supported by federal

and/or state funds. This joint effort includes the active participation by Council members and staff in the development of instruments and procedures for the collection of statistical data, and the use of these data for planning purposes. It also includes the participation of Council members and staff as adjunct members of evaluation teams in a select number of site visits conducted by Division of Occupational Education staff. By such participation, the Council is enabled to fulfill its responsibilities for assisting the State Board in developing plans for evaluations, and for monitoring these evaluations.

The Division of Occupational Education has made significant progress toward developing a model evaluation instrument and process, both of which are still being field-tested for state and federally funded vocational education programs. The evaluation process consists of the following elements:

1. A Program Administrative Review (PR): an evaluation of compliance with regulations.
2. A Program Assessment in Vocational Education (PA): an on-site evaluation of instructional program efficiency, conducted by an external evaluation team composed of persons from outside the local education agency, including educators, business, industry, labor personnel, and former or current vocational education students.
3. A Desk Review and Field Audit (DR): a review of selected fiscal records.
4. A follow-up of Students and Employers (FUSE): a survey of those students who have completed programs, and their employers, conducted by the local education agency.

Beginning in Fiscal Year 1981, each local education agency within the State being assisted with funds under the Vocational Education Act, prepared an annual Local Plan. The purpose of the Local Plan is to provide the Division with demographic data concerning membership in the local advisory council, source documentation used in developing the Plan, student needs by type/population, occupational skills training program needs by U.S.O.E. Codes, supportive program needs, program improvement needs, long and short range planning narratives, plans for collaboration, and plans for the uses of federal funds to meet goals for the educational programs.

The evaluation instrument currently being field-tested is exemplary. One standardized form now will be used in all regional offices of the Department of Education (whereas in the past, each region had its own instrument and those instruments were of uneven quality); one form will be used for both federal and state funded programs; and there is provision for student input to the evaluation. Although the newly developed instrument and process theoretically will enable the Division to evaluate 20% of all vocational education programs each year, this goal may not be attainable with the present staff complement. The Council previously has noted that the Division is hindered in evaluating programs by inadequate staff and resources. Recent cutbacks of both federal and state funding have resulted in a hiring freeze that has seriously eroded the Division's operational capacity.

There has been some improvement in the Accountability Report. In particular, the Council notes that the FY1980 Report contains a narrative section on evaluation, including summary program descriptions. It still is not evident, however, how results of evaluation are fed back into the planning process; i.e., what have we learned from evaluation about what kinds of programs work, and what should be changed? The Division does not seem clear as to precisely what use is to be made of evaluation results. Obviously, the design of evaluation instruments and processes is affected by the use to be made of results.

The Council's primary concern about the state's evaluation process is that the process should help LEAs decide which programs work and which do not, which should be

retained and which dropped. The often quoted question of whether vocational education graduates enjoy a net long-term monetary gain compared to non-vocational graduates is worth investigation, but is not the sole determinant of vocational education's value. For, while vocational educational does have an effect on a graduate's employment and wage experience, it is *education* we are talking about and not simply skills training.

In the broadest sense, vocational education for youth has a four-fold mission: (1) to increase the probability of graduation from high school; (2) to provide basic reading, writing and computational skills; (3) to provide basic educational, labor market and career information; and (4) to impart entry-level job skills. Thus, youth participating in vocational education programs may continue in school, return to school, graduate to postsecondary skills training programs, go on to college, or enter the military — all of which options are considered positive outcomes other than immediate placement in unsubsidized entry level jobs.

The Council is aware that any evaluation of vocational education is incomplete without information on students' postgraduate employment experiences. But the limited information currently available on students' expected placement status is not sufficient for evaluating whether vocational education programs adequately prepare students to compete successfully in the labor market. Due to these data limitations, little can be said about the employment experiences of vocational education graduates and, as a consequence, the evaluation process is severely limited.

The Division of Occupational Education does not appear to be addressing the essential question of whether vocational education in general is worth the additional cost. Nor is there much evidence that student placements and wage experiences are the *primary* criteria for deciding which programs in Massachusetts should be added, dropped or expanded. The Council does not believe, however, that these findings indicate lack of interest on the part of the Division. The Division has limited power in deciding what programs are offered at the local level, and does not have enough staff to generate sophisticated research studies. Moreover, the research, data gathering and evaluation personnel available must handle the often conflicting demands of national reporting, evaluation to improve programs at the local level, and evaluation to satisfy state law.

RECOMMENDATION

THAT THE DIVISION OF OCCUPATIONAL EDUCATION SELECT FOR EVALUATION TEAMS ONLY PEOPLE PROFESSIONALLY QUALIFIED IN THE OCCUPATIONAL AREAS BEING EVALUATED, AND THAT SUCH EVALUATORS RECEIVE THOROUGH TRAINING IN THE EVALUATION PROCESS BEING IMPLEMENTED.

C. DISTRIBUTION OF FEDERAL FUNDS

The planned distribution of federal funds for Fiscal Year 1981 is set forth on page 17 of the *Massachusetts Plan for Vocational Education for Fiscal Years 1981 and 1982*. The Council concludes, based on a review of the 1981 State Plan and 1980 Accountability Report, that Massachusetts has complied with the intent of federal regulations for distribution of such funds.

The most significant development in 1981 was the substantial recission of the 1982 federal grant award to Massachusetts (appropriated in 1981), which disrupted planning already underway. The following table details the effect of these cuts by sections and setasides in the Vocational Education Act:

**P.L. 94-482
MASSACHUSETTS**

	FY1980 Appropriation	FY1981 Appropriation	Percent Decrease
Subpart 2	\$14,419,721	\$12,901,742	10.5
Subpart 3	3,249,294	2,360,609	27.4
Subpart 4	514,431	372,880	27.5
Subpart 5	1,118,810	756,706	32.4
102D	128,608	93,207	27.5
TOTAL	\$19,430,864	\$16,485,144	15.2

D. COORDINATION OF VOCATIONAL EDUCATION WITH OTHER EMPLOYMENT AND TRAINING PROGRAMS IN MASSACHUSETTS

The Commonwealth of Massachusetts has made tremendous strides within the past five years toward the development of a coordinated system of planning for the training services designed to meet the needs of residents of the State. The days when the development of the State Plan for Vocational Education and other "manpower" program planning occurred completely separately from each other appear to have gone — and happily so. While there still are occasional problems when agency "turf rights" obstruct the sharing of ideas and information between agencies, or when duplication of effort occurs, the Council is pleased to report that, on the whole, coordination and cooperation between agencies is the rule rather than the exception.

A combination of factors has brought about the current spirit of interagency cooperation. Federal legislation requiring coordination of effort between Employment and Training Councils and Advisory Councils on Vocational-Technical Education has helped. The creation of Occupational Information Coordinating Committees has helped. But federal legislation mandating such coordination is not enough, in itself, to achieve the working reality; true coordination of effort comes about only when agency administrators and planners at the state and local levels realize that cooperation between and among their agencies is the best way for each of them to provide comprehensive services to their client populations, particularly in times when resources are becoming increasingly scarce. This is what really has happened in Massachusetts during recent years.

Elsewhere in this Report, the Advisory Council comments separately on the various activities of the Department of Education in carrying out its many responsibilities under P.L. 94-482, P.L. 95-207, and other related federal programs, and on the activities during FY1981 of the State Employment and Training Council and the Massachusetts Occupational Information Coordinating Committee. The degree of overlap that now exists in the separate sections of this Report is noteworthy, in that it is indicative of the close interaction that occurs on a daily basis among the various state and local agencies which constitute the Commonwealth's vocational education and employment and training system. Whereas in past years separate sections of the Advisory Council's Annual Report often seemed to describe separate activities, now each section is related in some way to another section within the Report, and the entire overall picture presented is that of an integrated whole.

Major credit for this steady progress toward inter-agency coordination and cooperation must be given to the Department of Education and to the State Employment and Training Council. Their joint effort several years ago in developing the State's Youth Employment Policy and the subsequent Youth Action Plan led to the realization by other state agencies that the sharing of ideas and the pooling of expertise and resources can provide mutual benefits, if the parties involved are willing to work together to achieve common goals and objectives. Perhaps more important is the fact

that, within the past two years, the example of interagency cooperation at the state level has begun to "trickle down" to the local level. This bodes well for the future since the decreasing availability of federal funds will necessitate that state and local agency personnel work ever more closely together to share their scarce resources and to coordinate their program planning and service delivery.

The Council takes this opportunity to observe that CETA has been an important part of the total employment training delivery system in Massachusetts in recent years. Despite a severe cutback in funds, during 1981 CETA served approximately 65,000 individuals in Massachusetts: 26,000 were in adult training programs; 26,000 were served under the Act's various youth titles, and about 13,000 were in public service employment programs (2/3 of which also involved job training). The total cost of these programs was approximately \$115 million. In the Council's opinion, CETA has made a difference, particularly where on-the-job training is an integral part of the program. Moreover, length of time in training is a major contributor to the likelihood of placement in unsubsidized employment. Several prime sponsor and statewide studies have been done demonstrating CETA's cost-effectiveness. The Council would like to see more such studies done and used as a basis for program decisions and policy making.

E. PUBLIC MEETING and BOSTON

The Advisory Council held a public meeting on May 12, 1981 for the purpose of providing an opportunity for vocational educators, business and labor, the general public, parents and students to comment on the vocational education delivery system in Massachusetts. In particular, comment was solicited on the following:

- The impact on vocational education of Proposition 2½;
- The extent to which vocational schools in Massachusetts are providing the vocational programs necessary to meet the Commonwealth's economic development needs;
- Improvements that can be made in the existing delivery system to meet the needs of business, labor and students;
- The strengths and weaknesses of the present system for distributing federal and state aid to vocational education; and
- Changes necessary in the federal Vocational Education Act.

The meeting was held at the Hubert H. Humphrey occupational Resource Center (the ORC) in Boston. Located adjacent to Madison Park High School, the Humphrey ORC is a new, \$35 million dollar facility offering programs in nine occupational clusters to all public high school students in Boston. Students generally take a half day of academic study at their "home" high schools and are bused to the ORC for a half day of skills training. Highly touted as the driving force behind what was to be Boston's new commitment to quality vocational education, the ORC was ten years in moving from the design stage to construction. Unfortunately, the opening of the facility occurred in the midst of a severe budget squeeze on education in general and on Boston in particular, and the ORC has had to contend not only with the normal problems any new school facility would face, but also with teacher layoffs, declining enrollments, court orders to correct racial imbalance among both students and staff, and budget cutbacks.

Thus, when the Council held its public meeting at the ORC (which, coincidentally, took place shortly after the majority of teachers at the facility had received lay-off notices), there was extensive testimony from ORC personnel on issues pertaining solely to the Center and/or to Boston, in addition to more generalized comments from people outside the Boston area about vocational education statewide. The remarks that appear below under the heading "Boston Concerns" should be understood as pertaining to Boston (and, more specifically, to the ORC), but not necessarily to vocational education elsewhere in the Commonwealth. Comments relative to the latter are subsumed under "General Concerns."

- **Boston Concerns**

Five themes were heard from ORC staff, as follows:

1. Too much of the administration of the Center is in the hands of "academics," consequently, programs, curriculum and the admissions policy are not in tune with vocational education needs.
2. The half day program ($\frac{1}{2}$ day spent on academic subjects at the sending schools, $\frac{1}{2}$ day spent on vocational education at the ORC) does not seem to be working well.
3. Certification requirements have been waived for many of the Center's administrative and instructional staff, putting the Center into non-compliance with accepted certification practices.
4. The building was opened prematurely, to meet a timetable, but was not really ready for students. Much of the equipment that was ordered still has not been delivered and/or is not in place in the shops.
5. With over $\frac{1}{3}$ of the student population having "special needs," the staff should have training that will better enable them to meet those needs.

In order to ensure the opportunity for those faculty and administrators who were not present to express their opinions, the Council mailed out a 51 item "opinionnaire" to all 150 faculty and staff members employed by the ORC for the 1980-81 school year. Fifty-six percent of these (84) were completed and returned to the Council office and one was not deliverable by the U.S. Post Office.

The responses of those who identified themselves as teachers were analyzed and compared with the responses of those who identified themselves as being other than teachers. The latter category includes administrators, program support staff, etc. Of the nine most strongly held opinions, four were held in common by teachers and "others," three were more strongly expressed by teachers than "others," and two more strongly expressed by "others" than teachers. In general, the opinions expressed via the survey instrument corroborated testimony presented in connection with the public meeting.

Curriculum

- Fifty-two of the teachers and nine out of thirteen "others" strongly agreed that the curriculum at the sending schools should articulate closely with students' career choices.
- Forty-one teachers and six "others" felt that 5-6 hours/week is the appropriate amount of time that should be spent on related work outside of shop time.

Special Needs

- Fifty-five teachers and nine "others" strongly agreed that students of limited English proficiency should be given intensive English courses to prepare them for shop instruction in English and for future job placement.
- Thirty-nine teachers and ten "others" strongly agreed that the increasing number of special needs students being mainstreamed warranted specific training of regular classroom and shop teachers to address the needs of these students.
- The majority of teachers responding to the survey strongly agreed that vocational students deemed by their instructors not to be profiting from vocational instruction should be counseled out, into other types of education. While, on the average, "others" moderately agreed with this statement, six of the thirteen were strongly in agreement.

Staffing

- Both teachers (49) and "others" (11) felt strongly that the maximum authority for operating a vocational school should lie with the Superintendent/Director of such school.

- The majority of teachers who responded felt strongly that a supervisor of vocational instruction should have substantial experience in the trade/occupational area being supervised, including at least five years of teaching experience in a vocational school. The average response of "others" was that they moderately agreed with this statement, although "strongly agree" was their most frequent response (six out of thirteen).
- While the average response of "others" to the statement, "The placement officer in a vocational school should be an approved vocational instructor," was moderate agreement (teachers strongly agreed with this statement), "strongly agree" was the most frequent response of "others" (five of the thirteen responding).
- Although teachers, on the average, moderately agreed with the strongly held opinion of "others" that the basic, essential personnel for a vocational school include *more* than the director, department heads and teachers, their most frequent response (twenty-five of the seventy-one) strongly agreed.

Several other needs were identified in testimony presented at the hearing: (1) to better serve adult learners and out-of-school youth. Reference was made to the as-yet-unfulfilled intent of the Center to serve, in after-school hours, the needs of the community in which it is located; (2) to diminish the gap between academic and vocational instruction, through integrating and reinforcing the basic skills of reading and computation (both combined with critical thinking), employability skills and computer literacy skills; and (3) for educational equity.

The Council notes that the final program audit of occupational education in the Boston Public Schools, described in the Council's 1980 Annual Report (pp. 46-49), has been disseminated and Boston has drawn up an action plan to respond to the audit findings; the Division is monitoring the implementation of that action plan. The Division also conducted a program audit of the Humphrey ORC during 1981, in which the Council participated, as an observer. The results of that audit had not been released as of the writing of this Report.

The State Department of Education's Bureau of External Audit also conducted a *fiscal* audit of the Boston Public School System's federal vocational grants for Fiscal Year 1978. As of this writing, the Council is unaware of any official Boston response to the audit exceptions for disallowed expenditures, line item variances and unexpended funds, as outlined in that audit report.

Program and fiscal audits have had no appreciable impact thus far on the quality of vocational education in Boston's public schools. Problems such as lack of information flow between teachers and administrators, lack of parent/community involvement, lack of systematic program evaluation and modification, and universally low morale among staff are not resolved with facile "action plans." So long as there is little incentive for anyone to tackle the decisions necessary for substantive reform, so long as the system's management structure is either "acting" or deeply involved in the politics of resisting change, and so long as teachers are demoralized and fearful of losing their jobs, vocational education in Boston will continue to decline, and the students of Boston will continue to graduate from high school (*if* they graduate) without marketable skills.

RECOMMENDATION

THAT THE BOSTON SCHOOL COMMITTEE COMBINE MADISON PARK HIGH SCHOOL AND THE HUBERT H. HUMPHREY OCCUPATIONAL RESOURCE CENTER IN A COMPREHENSIVE HIGH SCHOOL FACILITY OFFERING ACADEMIC AND VOCATIONAL EDUCATION ON A WEEK-IN, WEEK-OUT BASIS.

- **General Concerns**

1. Consumer and homemaking programs do not receive adequate state or federal support.

2. Field offices of the Division of Occupational Education should be staffed with specialists in program areas: the present "generalist" approach, under which state personnel are presumed to be knowledgeable about all program areas, does not work and does not assist LEAs in keeping current with labor market and technological changes.
3. Since the number of students enrolled in vocational programs in comprehensive high schools far exceeds the number enrolled in vocational schools, the current allocation method for federal funds should be continued, because it gives all LEAs the opportunity to access these funds.
4. It is imperative that business education, industrial arts and home economics be entitled to weighted state reimbursement rather than being treated as equal in cost to "general education."
5. Proposition 2½ (recently enacted tax reduction legislation) will reduce school budgets and, therefore, program options in comprehensive high schools. The State should address the necessity of modifying state mandates pertaining to "approved" vocational programs and required subjects, in order for students to access vocational offerings in comprehensive schools.

F. STATUS OF LOCAL ADVISORY COUNCILS

The Division of Occupational Education reports that Massachusetts had 300 local advisory councils for vocational education during 1981. The 2,500 citizens of the Commonwealth serving on such councils included 150 handicapped persons, 150 racial and linguistic minorities, 175, students, 275 parents, 350 labor representatives, 400 persons from local industry, 500 from other business areas, 500 educators, 125 representatives of community agencies, and 700 females. Although it may be argued that the statewide totals of representation in each category do not meet the implied requirements of Section 104.111 of the Regulations for P.L. 94-482, there can be no doubt that there is a mechanism in place for advising LEAs on the relevancy of programs to local labor market needs.

As this Council has reported several times, although local councils are in place and are being used, their effectiveness varies considerably among local systems. One reason for this variation is that many local council members are unsure of their role (as are the administrators who establish them). During 1982, the Massachusetts Advisory Council will devote more time to providing technical assistance to local councils, depending on availability of staff and budget. We believe, moreover, that local advisory councils should be retained in the reauthorized federal Vocational Education Act.

G. COMMENTS ON THE REPORT OF THE STATE EMPLOYMENT AND TRAINING COUNCIL

At this writing, the FY1981 Annual Report of the State Employment and Training Council was still in the early stages of preparation and was not scheduled for publication before February, 1982.

A year ago, this Advisory Council commented on the SETC's FY1980 Annual Report and we do not intend to repeat those comments. But the Council does wish to reiterate its endorsement of the SETC's position on the future of the employment and training system in these days of shifting federal priorities, and particularly in light of the pending debates on the reauthorization of the Vocational Education Act and the Comprehensive Employment and Training Act. The Advisory Council shares the SETC's view that Congress should re-examine these two pieces of legislation in tandem, and that future legislation should be designed to enhance greater participation by and coordination with the business sector, educational agencies and community based organizations in the planning, design and delivery of services.

Even in the absence of the SETC's Annual Report for FY1981, the Advisory Council is aware that the SETC has continued to play a major role in promoting closer inter-agency cooperation during this past year. During much of FY1981 the SETC has been

preoccupied with cuts in CETA funding, the phase-out of the public service employment program, and the increased emphasis on private sector initiatives. However, training program components of CETA and youth programs have been continued at much the same levels of activity as in FY1980 and, in these areas, the SETC has maintained close working relationships with the Department of Education and other state agencies that provide related services. The staff of the SETC has continued to work closely and effectively with the Division of Occupational Education's CETA office in administering the 6% grant for vocational education and in maintaining liaison between LEAs and CETA Prime Sponsors and subgrantees.

In conjunction with the work of the SETC, the Policy and Evaluation Division of the Department of Manpower Development has continued to publish a series of reports designed to assist state and local agency personnel by providing them with necessary data for program planning and implementation. Of particular interest to vocational education administrators and planners are the following reports published the past year:

The Public Vocational Education System as a Potential Source of Labor Supply to Selected High Technology Occupations.

An Analysis of Selected High Net Demand Occupations — Findings from a Statewide Survey.

A Report on Seven Growth Occupations in Massachusetts — Findings from a Statewide Employer Survey.

Preparing Women for Non-Traditional Occupations: A Description and Assessment of Women in Construction Programs in Massachusetts.

These publications, as well as a complete bibliography of all reports and papers published by the Policy and Evaluation Division, are available from the Department of Manpower Development.

H. STATUS OF THE MASSACHUSETTS OCCUPATIONAL INFORMATION COORDINATING COMMITTEE

During FY1981, the Massachusetts Occupational Information Coordinating Committee (MOICC), under new staff leadership, has maintained the forward momentum built up during the previous year and has provided even closer coordination than before in the collection, analysis and dissemination of occupational information so vital to vocational education and employment and training program administrators and planners.

One of the most notable contributions made by the MOICC during the past 12 months was the supervision for the Executive Office of Economic Affairs of a joint effort by the Job Market Research Service of the Division of Employment Security and the Policy and Evaluation Division of the Department of Manpower Development in surveying current employment opportunities throughout the Commonwealth, and identifying the 50 occupations most in demand by employers. The coordinated interagency research project led to the publication by the MOICC in June, 1981, of *High Demand Occupations in Massachusetts - 1981*, a document designed to present current and accurate information in a convenient and easily usable format for individuals seeking employment or a career change, and for the persons responsible for providing guidance on such matters to other individuals. This excellent report also supplies valuable information on current and projected labor market needs for vocational education and employment and training program planners.

The MOICC also served as the clearinghouse for the collection and dissemination of information on special short-term skill training programs offered between July 1 and September 30, 1981 by selected regional vocational/technical schools, community colleges, vocational high schools, State Colleges, and CETA Prime Sponsors and subgrantees. This coordinated, statewide program of skill training courses was co-sponsored by the Executive Office of Economic Affairs, the Office of the Secretary of

State, the Board of Regents of Higher Education, and the Department of Education, with the MOICC providing the essential communications linkages in this inter-agency effort.

In addition to these major undertakings, the MOICC continued to work with the staff of the Center for Labor Market Studies at Northeastern University to provide technical assistance to school and agency planners in conducting local employer surveys designed to collect up-to-date information on the characteristics of workers most in demand by employers.

Other on-going work of the MOICC included the provision of technical assistance to staff planners in the Massachusetts Rehabilitation Commission and in the Community Colleges, continuing liaison with the CETA Office in the Division of Occupational Education, and close cooperation with Division of Occupational Education staff in the Boston headquarters office and the Regional Education Centers in collecting and analyzing data for use in preparation of the State's Annual Plan for Vocational Education.

At this writing, the future of the MOICC beyond the end of FY1982 appears uncertain, in the light of current federal cuts and possible changes in the authorizing legislation. After a slow start, the MOIC has grown within the past two years into a positive force for promoting coordination of the data collection and dissemination activities of those state agencies responsible for the planning and delivery of vocational education and employment and training services to residents of this Commonwealth. The Advisory Council believes that this coordinating function is essential, and strongly recommends that the agencies involved begin now to make plans for continuing this vital clearinghouse activity in some form, even if federal funding for the MOICC should end.

CHAPTER II

VOCATIONAL EDUCATION PROGRAMS AND SERVICES

A. AGRICULTURAL EDUCATION*

Introduction

The Massachusetts consumer is very much concerned about soaring food prices, which in the Commonwealth are already 10% higher than in other parts of the nation. Over 85% of the Massachusetts food supply is imported from other states — mostly from California. Continually escalating transportation costs, impending water shortages, of crisis proportions, in the western United States, and worldwide competition for access to U.S. agricultural products, all combine to make it imperative that Massachusetts become more self-sufficient in agriculture. To put it bluntly, the more food we raise within Massachusetts' borders, the more money we keep here for economic development.

Despite the fact that Massachusetts is a highly industrialized state, some economists now are suggesting that it is one of many states in the nation where investments in agriculture will bring a greater return for each dollar invested than will similar investments in industry. Miller and White, in a 1979 research report, contend that one dollar invested in Massachusetts agriculture would effect an increase in personal income of about \$1.08, while an increase of only 47¢ would come from the same one dollar value added to manufacturing (see Appendix C-1).

According to projections from 1970 census data, the total number of full-time workers using agricultural/agribusiness competencies in their primary occupation in Massachusetts was approximately 60,000 in 1975. This figure accounted for 2.6% of the total number employed in all industries in Massachusetts in 1975 (see Appendix C-2). The time has come for the Commonwealth to increase its investments in agricultural technology and in the human resources which will develop, adapt and productively use this technology. To respond to this challenge, the school-age population will need to have greater access to high quality vocational education programs in agriculture than it currently has, because the number of vocational agriculture program graduates from Massachusetts schools each year continues to fall far short of the quantity needed by the Bay State's agricultural businesses and industries (see Appendix C-3).

• Agricultural Education

In contemporary terms, agricultural education is synonymous with agribusiness and natural resources education. It is broadly defined as:

An organized instructional program involving the combination of agricultural production and management operations and associated services, the manufacturing and distribution of agricultural equipment and supplies, the processing, storage, marketing and distribution of food, fiber and other agricultural commodities, the environmental protection and wise use of renewable natural resources — including air, forest, water, soil, animal, marine and plant life — and recreational (outdoor) resources, also involving associated education and research in all these areas.⁴

*Note The information in this section is adapted from a report prepared by this Council's ad hoc committee on Agribusiness, which thanks all those who contributed to the report, but especially Drs. John Denison, Kenneth Parker and William Thuemmel, all of the University of Massachusetts.

⁴See *Transitions in Agricultural Education Focusing on Agribusiness and Natural Resources Occupations*, American Vocational Association, Washington, D.C., 1971, p. 9.

Educational programs fitting the above definition can be found across the nation at many levels of schooling — elementary through adult. Also, these programs can be designed to meet urban, rural, or even suburban agricultural needs. Program purposes can be general, avocational, or vocational in nature. The program with the latter purpose — vocational agriculture — was the primary focus of the Council's agribusiness committee, because it involves the preparation of the citizens of Massachusetts and this nation for becoming skilled entrepreneurs and employees in the agricultural and renewable natural resources industries. *This can occur, however, only if the vocational agriculture programs are properly organized and operated as a statewide system, in concert with similar programs nationwide.*

- **Vocational Agriculture**

Vocational agriculture (or vocational education in agriculture) refers to organized instructional programs in agriculture/agribusiness at the high school level that prepare students for occupations in agricultural production; agricultural supplies and services; agricultural mechanics; agricultural products, processing and marketing; horticulture; renewable natural resources; forestry; and others. Only those programs which qualify for assistance under federal vocational legislation are considered vocational agriculture programs. There currently are nineteen (19) such programs in Massachusetts. A list of those schools and their locations and county populations for 1975 are shown in Appendix C-4.

- **Agricultural Education: An Integral Part of the Land Grant System**

Formal instruction in agriculture on a national scale began with the passage of the Morrill Act in 1862. Also known as the "Land Grant Act," this legislation provided federal support for the establishment of state colleges devoted to higher education in agriculture and the mechanical arts. The University of Massachusetts (founded in 1863 as Massachusetts Agricultural College) is one such institution. Other key dates and events in the evolution of a once strong system of agricultural education in the Commonwealth are listed below:

- 1907 The Massachusetts Agricultural College became the first college in the United States to establish a department of agricultural education for the purpose of training teachers of agriculture.
- 1910 The Massachusetts Department of Education, Division of Vocational Education, hired its first State Supervisor for vocational education in agriculture.
- 1913 Bristol and Essex County Agricultural Schools were established.
- 1916 Norfolk County Agricultural School was founded.
- 1917 Congress passed the Smith-Hughes Act to promote vocational education in agriculture at the high school and adult levels.
- 1918 The Stockbridge School of Agriculture was established within the University of Massachusetts (then Massachusetts Agricultural College), to provide agricultural instruction at the postsecondary level.

- **The Vocational Agriculture Delivery System in the United States**

During the past sixty years (since the passage of the Smith-Hughes Act in 1917), a very effective system has evolved for providing high quality programs of occupational (vocational/technical) education through the nation's public schools, postsecondary institutions, land grant colleges and universities. This system, like a good solid table, is supported by four essential, interdependent components, or legs, as identified below:

1. The agriculture/agribusiness *industry*.
2. Well equipped and staffed local/regional *instructional programs* in vocational and/or technical agriculture.
3. Contemporary *teacher education* programs in agriculture.
4. A State Department of Education agricultural *supervisory/administrative unit* that coordinates the interfacing, statewide activities of the above three components.

- **The Situation in Massachusetts**

During 1976-77, a federally funded (USOE Education Professional Development Act) project entitled "Standards for Quality Programs in Vocational Agriculture/Agribusiness Education" developed administration and supervision standards for quality programs in vocational agriculture/agribusiness education, for eventual adoption by each state. The Massachusetts statewide committee to implement those standards subsequently identified major weaknesses in the administration and supervision of vocational agriculture in the Commonwealth. Nine (9) of those deficiencies are listed below:

1. Weak state administration of agricultural/agribusiness programs. Local schools are not held accountable for establishing and maintaining high quality instructional programs in vocational agriculture, even though local schools are reimbursed with state and federal funds for a substantial portion of their operational costs.
2. Inadequate state support for inservice teacher education in agriculture.
3. Low certification standards for teachers of vocational agriculture.
4. An insufficient number of enrollees in programs of vocational agriculture in Massachusetts to meet the state's manpower needs in agriculture.
5. In New England, a lack of coordination/cooperation between the Massachusetts Division of Occupational Education and other state departments of education, with regard to regional activities in agricultural education.
6. Several Massachusetts schools began instructional programs in agriculture with little or no administrative assistance or qualitative guidelines from the Division of Occupational Education.
7. Several of the Commonwealth's "approved" programs of vocational agriculture lack one or more of the following qualitative components:
 - an active FFA chapter
 - home or on-the-job visits of students by teachers, on a year-round basis
 - supervised occupational experience programs for all students
8. Weak statistical reporting services with regard to agricultural education data, hindering good program planning and evaluation.
9. Absence of an active agricultural supervisory/administrative unit in the Massachusetts Department of Education, making coordination between the agriculture/agribusiness industry, local/regional administrators and instructors of vocational agriculture programs, teacher educators at the University of Massachusetts, and the State FFA Office unnecessarily difficult. This limits the effectiveness and efficiency of all components of the agricultural education delivery system.

- **Conclusions and Recommendations**

There are many school-age students in Massachusetts who would like to enroll in vocational agriculture programs but have no access to them. Some schools offer instructional programs in agriculture but would like to have these programs vocationally approved by the State Department of Education. These schools have received little or no technical assistance from the Department (Division of Occupational Education) in this regard. Also, there is very little control of professional standards for those programs of vocational agriculture which are "vocationally approved" and are available to the school-age population of the Commonwealth.

Good quality education programs cost money. The general public appears willing to support educational programs which are both effective — pedagogically and occupationally — and efficiently administered. The latter concern has prompted the reorganization of public higher education. The State of Connecticut currently is conducting an "Evaluation on the Relevancy of the Vocational Agriculture Program to the Changing Economy of Connecticut." This project is being administered by the Research Coordinating Unit, Division of Vocational Education, Connecticut Department of Education, with \$79,514 of federal funds provided under P.L. 94-482. Similar funding could be obtained for Massachusetts if aggressively sought by the appropriate agency.

It also should be noted that, since 1917, support for agricultural teacher education in the Commonwealth has been a joint responsibility of the Massachusetts Department of Education and the University of Massachusetts. However, the Department has sharply reduced its funding support for agricultural teacher education (from nearly \$30,000 in FY1979 to \$7,000 in FY1980), while the University was doubling the size of its agricultural education facility. This sharp cutback in funding occurred despite a serious shortage of qualified teachers of vocational agriculture, both regionally and nationally.

The delivery system for agricultural vocational education in Massachusetts has deteriorated badly during the past decade. Both quantitative and qualitative repairs are needed to strengthen the system and provide the high quality programs needed by the Commonwealth's aspiring future agriculturists. The Council makes the following recommendations, as a first step:

RECOMMENDATIONS

1. THAT THE DIVISION OF OCCUPATIONAL EDUCATION IMMEDIATELY HIRE A WELL-QUALIFIED SPECIALIST TO SERVE, ON A FULL-TIME BASIS, AS A STATE SUPERVISOR/CONSULTANT IN AGRICULTURAL EDUCATION, AND ALSO TO SERVE TEMPORARILY AS THE STATE FFA EXECUTIVE SECRETARY UNTIL SATISFACTORY ADMINISTRATIVE ARRANGEMENTS CAN BE MADE TO STAFF THE STATE FFA POSITION.
2. THAT THE DIVISION OF OCCUPATIONAL EDUCATION FUND A SPECIAL COMMISSION TO INVESTIGATE THE AVAILABILITY AND ACCESSIBILITY OF COMPREHENSIVE PROGRAMS OF VOCATIONAL AGRICULTURE TO THE SCHOOL-AGE POPULATION.
3. THAT THE DIVISION OF OCCUPATIONAL EDUCATION CONDUCT AN IN-DEPTH STUDY OF THE QUALITATIVE STANDARDS OF VOCATIONAL AGRICULTURE PROGRAMS IN MASSACHUSETTS, MAKE COMPARISONS WITH THOSE STANDARDS SUGGESTED BY THE FEDERALLY FUNDED PROJECT ENTITLED "STANDARDS FOR QUALITY PROGRAMS IN VOCATIONAL AGRICULTURE/AGRICULTURE EDUCATION," AND DEVELOP A PLAN FOR IMPROVING THE QUALITY OF VOCATIONAL AGRICULTURE PROGRAMS IN MASSACHUSETTS.

B. CAREER EDUCATION

FY1981 marked the third year in which federal funding was available to the Department of Education and LEAs under the Career Education Incentive Act (P.L. 95-207).

The allocation of \$328,689 for FY1981 was at the same funding level as in the previous year. For a change, however, notification of the availability of funds was received early enough to permit the Department to issue a request for proposals to LEAs before the end of the school year and to complete the process of reviewing proposals and making grant awards before schools re-opened in the fall of 1980. A total of \$281,275 was approved by the Board of Education to be utilized by 22 LEAs throughout the State for a variety of career education projects at the local level. In addition, \$30,000 was earmarked for State leadership activities to be coordinated by the Institute for Governmental Services at the University of Massachusetts, and \$15,200 was set aside to be used through the Commonwealth's Inservice Institute for training and technical assistance for LEA staff.

As in past years, the Office of Career Education in the Division of Occupational Education served as the focal point for handling the P.L. 95-207 funds. The State Plan for Career Education, which had been developed through a statewide planning effort in 1976 and 1977, approved by the Board of Education in May, 1978, and updated

annually as a result of FY1979 and FY1980 activities, continued to provide a list of goals and objectives to which LEAs were asked to respond when submitting proposals. Because of limited funding, LEAs which had received grant awards in the previous two years were not eligible to re-apply for continued federal support, with the result that all grants approved for FY1981 were to LEAs that were participating in the P.L. 95-207 program for the first time. However, all local school districts within the State were eligible to participate in the regional workshops and other activities provided by the University of Massachusetts and in the inservice training programs offered through the Commonwealth Institute.

A year ago, the Advisory Council commended the Department of Education for its equitable and efficient handling of P.L. 95-207 funds, and the Council is pleased to note that the same level of professional expertise has distinguished the State's career education activities during the FY1981 cycle. The Council is particularly impressed that the local and regional career education planning effort, in which the Council members and staff participated actively between 1976 and 1978 and which led to the development of the State Plan for Career Education, has proved so valuable as a basic planning structure around which all subsequent career education activities in the State have been developed during the past three years. The Department of Education deserves great credit for its demonstrated commitment to the concepts and principles of career education, and for the leadership it has provided in recent years in assisting LEAs to develop and implement career education activities that fit within the framework of a coordinated statewide plan.

The intent of the federal legislation was to provide "seed money" to states and LEAs, to encourage them to infuse career education concepts into the regular school curriculum and to provide inservice training for staff to assist them in this effort. By its handling of the P.L. 95-207 funds during the past three years, the Department of Education has implemented fully the intent of the legislation and has gone far toward ensuring that, in the future, career education will become an integral part of the educational experience of students throughout the Commonwealth, with or without continued federal incentives and support.

C. MINORITIES AND WOMEN

In its 1980 Annual Report, the Council devoted considerable space to the role of vocational education in addressing the high rates of unemployment and other problems experienced by youth from poor and near poor families — especially Black and Hispanic youth. In a sense, the plight of such youth has been studied to death; their problems have been exhaustively defined and documented for at least twenty years. What is needed now is a long-term commitment to provide the skill training, basic education and career guidance programs that have been proved effective in countless demonstration projects.

During 1981, the Council began to address the question of how needed change will evolve, given a current contracting economy and a climate of "taxpayer revolt." Specifically, if resources for public schools are diminishing, is it still reasonable to expect the schools to radically upgrade, expand or alter their vocational education programs? As a first step in answering this question, the Council undertook a supply/demand study of vocational programs in Massachusetts, with a view to determining if the needs of *all* students who desire and seek such training are being adequately met by the existing education system. This study is on-going and should be completed in 1982. The aggregate data obtained thus far will be refined by sex, race/ethnicity and handicap. Random samples of students will be interviewed to gain further understanding of:

- (1) the kinds and sources of counseling they are receiving;
- (2) their perceptions of what the "high demand" occupations are;
- (3) the significant influences on their choices of vocational programs; and
- (4) their perceptions of the quality of vocational education they are receiving.

As part of this study, the Council also will address the question of how classroom teachers are best prepared to orient students to the world of work. Specifically, are there ways in which the *private sector* can provide teachers with a realistic understanding of the workplace outside of school, so that teachers in turn can impart to their students knowledge and attitudes consistent with the job situations young people will be encountering? The Council seeks to identify exemplary programs where this has been done and to make the results available to the Division of Occupational Education.

During 1981, the Council also undertook a study of the effectiveness of the Vocational Education Act (P.L. 94-482) from the perspective of Hispanic and other minority women. The preliminary results of this study, which will be concluded in 1982, show that in Massachusetts there is inadequate representation of women in general, more so of minority women and even more so of Hispanic women, in the planning process, staffing patterns and student distribution in vocational education programs. Neither are minority women adequately served in adult vocational education, especially in the case of Hispanic women, and particularly, of Puerto Rican women.

- **The Importance of Guidance and Counseling for Women**

The Council believes that the sources of influence on anyone's choice of vocational education program are complex, and that young people in particular need information about educational/occupational options *and* about the decision making process. If the goal of human development is to be realized, we must help all individuals to know that they can choose according to their particular abilities and motivations. Young women especially need to be helped to fully appreciate that they will be long-term participants in the labor force and that they will have choices that go beyond traditional assumptions about female roles in work and family life. At the same time, young people of both sexes who face the greatest barriers to employment — minorities, dropouts, those with limited skills and those from poor families — often need more counseling and different kinds of counseling than do more advantaged youth.

The Council repeats a point made in its 1980 Report: despite the fact that one out of two women today more than likely will spend a portion of her life working for pay, there are few courses or programs designed to help junior high and high school-age girls understand why it is important for them to think ahead about preparation for continued training and long-term commitment which would lead to advanced status in the labor force at higher wages. The public schools need to begin developing ways to make outreach and counseling part of the mainstream of the teaching/learning process, at the secondary and postsecondary levels. We need to find ways to help girls and young women broaden their career perspectives, not only to give them information, but also to give them the motivation and desire to risk breaking out of stereotyped occupational roles. Part of this process, especially at the junior high school level where parents still have a great impact on their children's goals and aspirations, is to find ways to acquaint parents with the facts about trends in work and family, and the need for career planning for girls.

The importance of helping young women from low income families to recognize and believe that they have viable career options cannot be overemphasized. Youngsters from middle and upper income families usually have more information, more freedom and even more motivation because many of their mothers are entering professional and technical roles. These trends are not found to the same degree among low income households, where mothers still tend to be domestics, nurses' aides and clerk-typists. These jobs have dignity, of course, but they are not well paid and they typically are designated as "women's work."

THE COUNCIL COMMENDS THE DIVISION OF OCCUPATIONAL EDUCATION FOR ITS SUSTAINED EFFORT TO OPEN SELECTIVE SECONDARY VOCATIONAL SCHOOLS, WHICH OPERATE THE GREAT MAJORITY OF PROGRAMS AIDED AND REGULATED BY MASSACHUSETTS GENERAL LAWS, CHAPTER 74, TO FEMALES, NON-WHITES AND LINGUISTIC MINORITIES. Programs such as Project SCOPE,

which addresses the need for the support group concept as it relates to students in non-traditional occupations, also are a good investment of federal funds.

The Council notes the excellent study done under contract with the Division by the American Institute for Research, entitled *You Want to be a What?: Sex Equity in Massachusetts Vocational Programs*. This study of the process by which students come to enroll in and complete programs that are nontraditional for their sex speaks to the essential questions:

1. What factors do students in nontraditional programs identify as important with regard to their decisions to enroll in vocational programs that are nontraditional for their sex?
2. What barriers are encountered during the decision-making process?
3. Are there any differences between what students thought nontraditional program enrollment would be like and what it really is like?
4. What aspects of nontraditional program enrollment do students perceive as most satisfying?
5. What difficulties do students in nontraditional programs experience, and how do they cope with these problems?
6. What leads some students to complete and others to drop out of vocational programs that are nontraditional for their sex?
7. How does participation in a cooperative work experience affect the overall experience of nontraditional program enrollees?
8. To what extent do students engage in mutual support with same-sex nontraditional program enrollees, either formally or informally?
9. In what ways do students enrolled in nontraditional vocational programs perceive that they are treated the same as or differently from their opposite-sex classmates?
10. Do seniors in nontraditional vocational programs intend to seek employment that is related to their skill training?
11. What are the employment outcomes of nontraditional program graduates?
12. What policies and practices do students enrolled in nontraditional vocational programs recommend to encourage recruitment and retention of students in vocational programs that are nontraditional for their sex?

The Council would like to see the Division of Occupational Education give even greater emphasis to finding ways to meet the career development needs of young women, with special attention to the needs of Black and Hispanic women in low income circumstances. Since women and minorities normally have not been offered a full range of career opportunities, special attention should be given to their counseling needs — for as long as it takes to eliminate longstanding barriers — so that their career choices are real. The Council recommends trying to impact on parents first, and then helping the parents to influence their children to broaden their horizons. Peer counseling works best with secondary and postsecondary females, where those who may not yet be active in a particular field but who are enrolled in relevant academic/training programs can tell young women thinking about a career what it is like to go on for additional required training. Young women can learn from and be motivated by peers from their own neighborhoods, racial/ethnic groups, or income brackets, who can demonstrate that it really is possible to challenge the conventions of sex-specific occupational roles.

D. POSTSECONDARY VOCATIONAL EDUCATION

The Vocational Education Amendments of 1968, the Higher Education Act of 1972 and the Educational Amendments of 1976 all emphasized the importance of collaborative planning and coordination among institutions offering vocational education, so that students would have maximum career mobility, and education and training

resources would be utilized effectively. In recent years, long-term cooperative planning and joint programming, among secondary institutions and between secondary and postsecondary institutions, have been highly regarded as appropriate responses to taxpayer rejection of increased taxes and bond issues, to questions about duplication of vocational education programs and facilities, and to the problem of competition for students during a period of enrollment decline. However, for various reasons that are well documented⁵ including institutional rigidity and the psychology of self-interest, the goal of "articulation" remains elusive.

Until very recently, the process of joint planning and program delivery in Massachusetts has been made more difficult by a tendency to view vocational education as being primarily within the province of the secondary level education system. This mind-set ignores the evidence that vocational as well as non-vocational high school graduates benefit from going on to community college (or other postsecondary) programs, and that such programs are more responsive than secondary courses, both to the labor market and to changing student needs. The Council believes that if it is the case that Massachusetts faces a growing shortage of paraprofessional and technical workers, as well as engineers and scientists, then *good policy would dictate putting more state and federal vocational education dollars into postsecondary vocational education programs*. Before doing so, however, the Board of Education, the Board of Regents and the Legislature must address the notion of locus of delivery: What kinds of programs more reasonably belong in a postsecondary environment than in a secondary environment? What, if any, overlap should there be between secondary and postsecondary? What new educational policies should be guiding the initiation and redevelopment of vocational education programs? What are the most efficient and educationally effective strategies for moving beyond entry level training to provide avenues for post-entry level mobility?

As it seeks the opinions of the representatives of the postsecondary vocational education system in Massachusetts (primarily community colleges), the Council consistently hears three themes. The *first* is that if the State's economic development potential consists largely of sophisticated technical industries and services requiring highly skilled workers, then more vocational education dollars should be directed to postsecondary programs. *Second*, sophisticated technical programs at the postsecondary level require solid preparation at the secondary level, both in academic and in generalized occupational skills. *Third*, both the state budget process and the allocation formula for federal vocational education monies need to be rethought as they affect postsecondary vocational education programs.

The basic problem with the state budgeting process for postsecondary education (aside from insufficient funds) is that it is primarily a full-time equivalent, student-driven budget, with little or no relationship to either program merit or realistic cost factors. In the case of federal money, the 15% setaside for postsecondary education is inadequate when regarded as a maximum rather than as a minimum. Furthermore, the two major allocation factors stipulated in the federal regulations simply do not apply to community colleges. The allocation factors are based on the idea of subsidizing poorer communities, but there is no such things as a "poorer" community college, since they derive no funds from local taxing agencies but only from the Legislature.

Federal funds have made a difference and have been an essential source of "seed money" for new programs and equipment in postsecondary education in Massachusetts. This is especially true for the more expensive programs in health, technical, and trade and industrial occupations, which must meet both increasing demand and rapid technological change. At Springfield Technical Community College, for example, programs launched with federal funds (but now self-sustaining) currently make up 50% of the total technology program offerings.

⁵E.g., David S. Bushnell, "Confusion on the Bridge: Articulating Vocational Education at the Postsecondary Level," paper presented at the Boston Regional Conference on Education for Work, Boston, December 14, 15, 1978.

Conclusions

On March 1, 1981, a 15-member Board of Regents officially replaced all previous governing boards for the State's 28 public colleges and universities, including the 15 community colleges. That the new Board would need time to create an organizational structure and inform itself on the issues is understandable. But the Council is concerned that not enough attention is being given to substantive programmatic matters, such as who should be teaching what to whom and for which purposes? Who pays how much, and why? Talented faculty are leaving for better paying jobs in the private sector, equipment is becoming obsolete, and fresh programmatic ideas go unfunded.

It is time to re-evaluate the amount of federal funds directed to postsecondary education in Massachusetts and the process for awarding grants. With the "baby boom" over, at least as much attention should be given to the adult learner as has been focused in the past on the high school student. Students in postsecondary programs represent one of the best investments in human capital it is possible to make with public funds; such students tend to be older, already working while going to school part-time, concerned primarily about career opportunities, and highly motivated. Economically disadvantaged women, minorities and handicapped individuals are well-represented in this group. And net annual costs per student can run substantially below comparable costs in secondary education.

Postsecondary students not only have a clearer idea of what their goals are, but they also are better prepared to understand the complex technology that is the foundation of today's career skills. On the basis of any kind of cost effectiveness, it would seem that the community colleges have more to offer than that which is commonly recognized, including a proven record of program completion and job placement. Old myths should be replaced with new realities of what is productive, efficient, and has a significant impact on the growth and future of the economy and general well-being of the Commonwealth.

The decision making process underlying the granting of federal funds needs to be examined. While proposals are obviously necessary, attention should be paid as well to an agency's past record of success or failure with vocational education programs, as well as to the quality and availability of facilities and staff.

The administration of vocational education grants also needs to be examined. Presently, the policies and practices which govern the operations of community colleges make it difficult, if not impossible, for them to conform to state regulations designed for secondary school populations. Vocational education funds awarded to community colleges during the past three years have steadily decreased and it is probably inevitable that total federal funding will continue to decrease over the next several years. Accordingly, it is more crucial than ever that the most effective and efficient policies be developed for the future administration of vocational education programs in both secondary and postsecondary sectors.

Greater decision making authority should rest at the local grantee level if cost saving measures are to be implemented, and if more efficient administration of limited grant funds is to be achieved. Current policies allow a 10% upward or downward float of funds between line items. Future block grants to institutions should allow substantial floats between proposed project budgets and should demand performance-based justification for the expenditure of funds.

Bureaucratic problems causing long delays in the receipt of funds also have caused severe hardships for grant recipients. Often, the academic year commences before the grantee has received any of the current year's funds. Educational institutions find it difficult, if not impossible, to pay faculty members and order equipment out of other funds until the federal monies are released.

RECOMMENDATION

THAT THE DIVISION OF OCCUPATIONAL EDUCATION, IN CONCERT WITH THE BOARD OF REGENTS, REASSESS THE FOLLOWING:

- THE PROCESS AND CRITERIA USED IN AWARDING FUNDS;
- COST-EFFECTIVENESS, ON A PROGRAMMATIC BASIS, OF THE DOLLARS BEING AWARDED;
- THE ISSUE OF MORE FLEXIBILITY FOR THE GRANTEE OF THE DOLLARS BEING AWARDED;
- THE VALUE AND COST OF THE CURRENT REPORTING SYSTEM; AND
- THE JUDICIOUSNESS OF MAINTAINING THE MINIMUM SETASIDE FOR POSTSECONDARY EDUCATION, PARTICULARLY GIVEN THE PERSONNEL NEEDS OF THE HIGH TECHNOLOGY INDUSTRIES OF THE COMMONWEALTH, AND OF OUR VITAL HEALTH CARE DELIVERY SYSTEM.

CHAPTER III

REAUTHORIZATION OF THE VOCATIONAL EDUCATION ACT

A. INTRODUCTION and BASIC ASSUMPTIONS

Although the expiration date of the federal Vocational Education Act (VEA) has been extended to September 30, 1984, the debate in Congress as to the appropriate federal role in vocational education continues. The Massachusetts Advisory Council on Vocational-Technical Education (the Council) wishes to provide the Congress with grass roots, empirically derived information and opinion as to how well the 1976 Amendments to the VEA (P.L. 94-482) have worked, and what changes are required in order to address the issues likely to dominate public policy debate in the 1980s. The Council's remarks are presented in the following two sections: Part B is an overview of the success of the 1976 Amendments, derived from the Council's experience in Massachusetts and from the National Institute of Education Study mandated by P.L. 94-482; Part C contains general recommendations for change in the reauthorized VEA.

The Council's recommendations assume that vocational education is and should remain a decentralized system, subject to local (i.e., local education agency) control based on local needs. If the vocational educational enterprise is to receive federal support, however, it must be able to demonstrate that it is helping to solve national problems of poverty, unemployment and underemployment; lack of equitable access to training and jobs; unequal educational opportunity; chronic inflation, and declining productivity. Therefore, the role of the federal government should be to provide incentives for local and state vocational education agencies to go beyond traditional courses and delivery systems in addressing national priorities.

The following goals should undergird the federal role in vocational education: a) eliminating discrimination because of race, sex, handicap or limited English language proficiency; b) reducing inter-state and intra-state disparities in financial ability to support quality education; c) protecting the rights of state and local governments, and public and private institutions, in the areas of educational policy and administration of programs; d) meeting industrial modernization needs; and e) providing the skilled labor force required to mount a major defensive effort in a national emergency. In pursuing these goals, the Congress should resist the temptation to design a piece of legislation that merely incorporates a series of compromises reflecting the self-interests of different constituent groups; rather, the new legislation should be the end product of a thoughtful assessment of the nation's needs, and a logically developed process that will enable vocational education to make its maximum contribution in meeting those needs.

B. HAVE THE 1976 AMENDMENTS WORKED?

In the Council's judgement, the essential questions before the Congress, as it debates reauthorization of the Vocational Education Act, are these:

1. Have the 1976 Amendments to the VEA achieved what the Congress intended? Specifically:
 - (a) Has there been improved planning, including better coordination of vocational education with the employment and training system, and a closer partnership between education and the private sector?
 - (b) Has there been improved evaluation, toward the goal of keeping vocational education curricula and personnel current with technological change, labor market demands and student needs?
 - (c) Do people who in the past have been denied access to quality vocational

education because of disadvantage, race, handicap, sex, national origin or age, now have an equal opportunity?

(d) Have local school districts and institutions received federal funds commensurate with their needs?

2. What should be the focus of a new federal vocational education policy?
3. What should be the key components of new vocational education legislation?
4. What should be the dollar level of the federal investment in vocational education?

In seeking the answers to these questions, the Congress will have the benefit of several new sources of data and information mandated under P.L. 94-482, such as the National Institute of Education's Vocational Education Study, the new Vocational Education Data System (VEDS), and state plans and accountability reports. The reality is, however, that hard data on the condition of vocational education are still in short supply, largely because vocational education occurs in such a variety of institutional settings and delivery systems that it is very difficult to establish a mandatory statistical base for describing the vocational education enterprise nationwide. The Congress will have to continue to rely on public testimony from consumers and providers of vocational education for first-hand judgements, insights and policy-relevant analyses useful in formulating future legislation. State Advisory Councils (SACVEs) are uniquely qualified to provide such advice, since they are autonomous bodies established by the Congress to represent all parties who have an interest in employment-related education and training, including business, industry, labor, agriculture and the general public.

The only possible general answer to the question, "Have the 1976 Amendments worked?" is, "Yes, but not as well as the Congress intended," a conclusion amplified in the following paragraphs and substantiated in SACVE annual reports to the U.S. Department of Education since 1976. Additional, detailed information and data will be provided in written and oral testimony as the reauthorization process unfolds.

On the issue of *planning*, most SACVEs report that the planning process is more broad-based than before. State agencies seem more willing to listen to diverse points of view and to incorporate suggestions into the state plan. There does seem to be improved coordination between vocational education and the employment and training system, at least at the state level, and there is an attempt to use labor market data in planning. However, the major development of state plans is still done by the state divisions of vocational education, often by one or two individuals; public hearings have not substantially increased input from labor, business and the general public; local level providers pay scant attention to the state plan, except as a "rule book" for applying for federal funds; and the plans sent to Washington, while more than strict compliance documents, do not reflect what actually is happening in the states in vocational education.

The blunt truth is that the federal requirements for planning are costly, unnecessarily technical and often contradictory. And since the U.S. Department of Education reviews the state plans from a strict compliance stance, federal requirements still dictate the form and even the content of state plans. The resulting instruments are more useful at the federal level than at the state level.

The SACVEs reaffirm the need for a well articulated planning process, which provides direction and purpose for local planning, and communicates to policy makers, employers and the general public the role and mission of vocational education. However, such a process must focus on the integration of planning at all levels, rather than on compliance, and must recognize the unique needs of the individual states. The states have more sophisticated planning abilities than the required plans have revealed.

The 1976 Amendments to the VEA mandated major new requirements for state evaluation of federally assisted programs. The overall impact of these statutory requirements, which were extensively augmented by U.S. Department of Education

regulations and memoranda, has been positive, in the sense that the states seem to have a firm commitment to evaluation and increasingly are using the results of evaluation to make funding decisions. But, as is true of planning, the well intentioned and theoretically plausible efforts of P.L. 94-482 to improve evaluation have produced comprehensive/complex systems that tend to lose sight of the purpose of the exercise.

What local planners and managers need to know is: (a) does the program meet student needs? and (b) does the program meet employer needs? In our zeal to create elegant evaluation schemes with stunningly logical properties, we often have failed to answer these critical questions. The emphasis at national, state and local levels has shifted from "what" we are doing to "how" we are doing it.

In addition, vocational educators have serious problems with the view held by many at the federal level that the major criterion for measuring program effectiveness should be job placement. Vocational education is, after all, *education with an occupational focus*. Somehow, the broad educational goals of vocational education must be accounted for in any assessment of the extent to which programs are successful.

The 1976 Amendments set in place a variety of statutory requirements to provide *equality of opportunity* for those who are disadvantaged, have limited English-speaking ability, are handicapped, or women. Although the NIE study and other assessments are not complete, it is apparent that the Congressional objective to improve access for these "target" populations has not been fully realized. Despite the lack of dramatic progress, however, there have been significant gains since 1976 in the struggle to provide equal vocational education opportunity, and these gains would not have been made without the incentives provided by federal legislation and funds.

We have learned that public education cannot assume sole responsibility for equal educational outcomes; there are too many variables that are beyond the control of the schools. What public education *can* do is assure that public resources are allocated in a manner that does not intentionally discriminate against young people with racial or other characteristics different from the majority, or traditional beneficiaries. The VEA as it is presently written falls short of providing the framework and incentives necessary to achieve this goal, in four areas:

First, the term "disadvantaged" has no common meaning and has proved extremely difficult to implement locally; "handicapped" students are somewhat more easily identified but here, too, there are problems; there is a great deal of confusion over the difference between "limited English-speaking" and "bilingual;" the term "Black" is not used at all, which leads some Blacks to conclude that they are being ignored.

Second, failure to fully realize the goal of equal access for special populations is partially due to inadequate federal funding and to requirements that slice the pie so thinly that no group fully benefits. The goal for special population groups is to mainstream individuals into regular vocational education programs. Setasides, however, in many cases force agencies to use a "pull out" model, since the provision of supplementary services or excess costs must be demonstrated. This approach, combined with the small amounts available, has done little to alleviate the problem. Moreover, the cumulative effects of the setasides, minimum percentages, excess costs requirements and affirmative action requirements have become impossible to administer.

Third, vocational education cannot do it alone; linkages with other delivery systems, much talked about, do not yet operate effectively. Presently, there are no uniform definitions, no equality in commitment of agencies involved in linkage, no way to enforce involvement of various agencies.

Fourth, with respect to all special populations, there is a serious problem of recruiting and training qualified staff who also can serve as role models.

Concerning the issue of *funding*, the 1976 Amendments created serious controversy and confusion by combining, without reconciliation, separate provisions from House and Senate bills. While everyone recognizes the intent, which is to target federal funds to applicants with greater needs, the ambiguity in the statutory language has required

an unreasonable amount of substantive policy making from federal program administrators. The Bureau of Occupational and Adult Education has issued regulations, rules and interpretations that have compounded both legal and technical problems inherent in the statute's silence on how states are to weight allocation formulas. Maintenance of effort, supplanting and setaside requirements combine with arbitrary judgements and spurious interpretations of law to put a straightjacket on state agencies, which have widely differing populations, school finance issues, economic development needs, delivery systems and tax bases. These problems are all the more frustrating in light of the fact that federal VEA dollars account for only one dollar in eleven reportedly spent on vocational education nationwide.

Because of the diversity of local, regional and state socio-economic systems, the attempt to impose one common funding procedure in the VEA to govern the flow of federal funds must be deemed a failure in the 1976 Amendments. This is one facet of the Act that needs careful rethinking, taking into account everything learned over the last five years.

C. RECOMMENDATIONS

1. Statement of Purpose

The primary purpose of federal vocational education legislation should be to enable the federal government to assist the states in improving and expanding quality vocational education. Therefore, the purpose of the legislation should focus on the following goals:

- upgrading the existing vocational education and employment training delivery system;
- supporting and strengthening the relationship between education and work;
- addressing the national concern for improved productivity;
- making quality vocational education readily available to all persons of secondary age or above; and
- enhancing the capacity of the state to develop skilled workforce training programs consistent with state economic needs and plans.

2. Definitions

The federal vocational education legislation should specify a set of definitions that apply to all federal vocational education and employment training acts.

States, local education agencies, and local employment training agencies have been confused and frustrated by the absence of commonly understood definitions of such terms as: "disadvantaged," "handicapped," "limited English-speaking," "ancillary services," "placements," "course," "class," "program," and even "vocational education." Definitional problems result in dual reporting, incomplete and unreliable data, difficulty in communicating with federal and state legislatures, policy boards and fiscal control agencies, and misunderstandings between vocational educators and other employment training providers. A uniform set of definitions will simplify reporting, save money and improve working relationships with the employment sector.

3. Planning

The present VEA planning requirements should be modified to reduce administrative burden, but NOT eliminated altogether. In no event should the use of state and local funds be subject to detailed federal planning requirements. The present focus on federal compliance is costly to administer and ignores the unique needs of the states. The national vocational education delivery system is too varied, and the data base too unreliable, for the kind of planning envisioned under the present VEA.

Modifications in existing requirements should include: (1) replacement of the five-year program and annual plans by a three-year plan with optional annual updates; (2) an increase in funds for state and local planning; and (3) simplification of reporting requirements, including the reporting of student enrollments by broad occupational area rather than six-digit codes.

Federal-level review of state plans should be for the purpose of determining:

- that the state plans contain narrative statements saying what each state intends to accomplish and how it intends to do so—these should be in the form of policy statements rather than dollar and enrollment projections;
- that programs and projects will be administered and carried out in a manner consistent with the basic objectives of the VEA;
- that citizen advisory councils will be involved in planning and carrying out programs and projects;
- that the private sector will be involved in the planning and operation of programs, to ensure that such programs are consistent with local needs;
- that coordination with economic development activities will be emphasized; and
- that there will be a substantial effort to coordinate all education, employment and training service providers, including CETA and the Employment Service.

The role of the U.S. Department of Education should shift from strict compliance review to providing leadership, technical assistance, and information dissemination on innovative programs and approaches.

4. *Evaluation and Accountability*

The federal government has a legitimate interest in promoting rational planning and enhancing the responsiveness of the vocational education delivery system to labor market demand, but *any federally mandated evaluation requirements should be based on a clearly defined policy* that sets forth the purposes of evaluation and the procedures to be used. Since the primary purpose of evaluation is to improve planning and program operation, *procedural details should be determined at the state level*, in order to accommodate differing local systems within the states.

Congress should seek answers to the following questions:

- What is the (relative) value of vocational education to the nation?
- To what extent have states and local communities improved their capacity to achieve mutually desired outcomes?
- Have the states and local communities used the resources allocated to them in accordance with the law?

In order to answer these questions, the Council recommends the following:

- Federal vocational education legislation should allow for goals and objectives for youth other than job placement and increases in earned income. Congress should recognize that while vocational education does have a long-term effect on the employment and wage experience of youth, including low-income and minority youth, it is *education* we are talking about and not simply skills training. In the broadest sense, vocational education for youth has a four-fold mission: (1) to increase the probability of graduation from high school; (2) to provide basic reading, writing and computational skills; (3) to provide basic educational, labor market and career information; and (4) to impart entry-level job skills. Thus youth participating in vocational education programs may continue in school, return to school, graduate to postsecondary skills training programs, go on to college, or enter the military—all of which options are considered positive outcomes other than immediate placement in unsubsidized entry-level jobs.

The Council is aware that any evaluation of vocational education is incomplete without information on students' post-graduate employment experiences. But the limited information currently available on students' expected placement status is not sufficient for evaluating whether vocational

education programs adequately prepare students to compete successfully in the labor market. Due to these data limitations, little can be said about the employment experiences of vocational education graduates and, as a consequence, the evaluation process is severely limited.

- Legislation should require states and local communities to cooperate with the U.S. Department of Education in its conduct of audits designed to determine whether the requirements of the law have been met.
- Legislation should require states to provide annual accountability reports to the Assistant Secretary for Vocational and Adult education (covering resources, processes and quantity of product).
- Legislation should provide financial assistance to states and local communities for conducting evaluations designed to improve the planning process and the efficiency and effectiveness of their delivery mechanisms.
- Mandated reporting by states should include only the essential information and data needed for making decisions at the national level. States should receive assistance in developing the systems which will be used in collecting the mandated information and data.

5. *Equity and Access*

The goals of access to and equality in vocational education, emphasizing programs and services for people with above-average needs (notably, economically disadvantaged individuals, especially those who are also female, handicapped, or members of racial/ethnic minority groups) should continue to be major priorities of federal vocational education legislation. Given the constraints of current "tax revolt" initiatives and inflation, there is little reason to believe that local units of government will have much incentive to seek the additional revenue required to fund special programs for target populations. It is still true, however, that breaking down artificial barriers to employment is good social policy, and using public funds to provide basic education and entry-level skills is good economic policy. For aside from the simple question of justice, the long-term economic success of the United States depends on the degree to which its skilled work force can be expanded and upgraded to meet relentless competition from other nations, in both domestic and international markets. And since the U.S. workforce will grow much less rapidly in the next two decades than in the 1960s and 1970s, while the relative proportion of racial/ethnic minorities and women in the workforce will increase, the skilled people the nation needs will have to come from a pool of people who have not been well served by the traditional employment and training system.

This challenge can be met only through a coherent national policy on employment and training, one which clearly defines the roles of the public and private sectors. There should be a dual mission for the entire employment and training system, including vocational education, that will assist economically disadvantaged and near poor individuals in gaining economic self-sufficiency, and aid the private sector in meeting its skilled labor requirements.

6. *Remedial and Basic Education*

The new federal vocational education legislation should emphasize the need for remedial programs in basic literacy and computational skills as an integral part of serving disadvantaged populations. Numerous studies suggest that much of the difficulty that disadvantaged and near poor populations have in finding decent jobs arises from unsuccessful experience in schooling; they simply lack the basic literacy and computational skills employers expect in new employees. The evidence also suggests that basic education is often best taught when linked in students' minds with the likelihood of success in the job market.

7. *Postsecondary and Adult Programs*

Postsecondary institutions have played an increasingly important role in vocational education over the past decade, far beyond that represented by the 15 percent

setaside in present law. The Council believes that this expanded role must be recognized. Many four-year institutions, as well as community colleges and technical institutes, are offering certificate, associate degree, and in some cases, baccalaureate programs. The Council questions whether the outright prohibition in the current Act against funding baccalaureate degree programs should be continued.

Congress should give consideration to a limited demonstration program to permit the expansion of vocational programs to the third and fourth years of college. This should be restricted to certain high technology occupations where additional training is required to qualify for jobs at less than professional levels.

Incentive bonuses should be provided where arrangements permit the sharing of facilities, and where strong articulation exists between secondary and postsecondary institutions, so that students can move in a logical progression from secondary vocational programs to more advanced postsecondary technical programs.

A separate adult title, in addition to a comprehensive title for youth, is advisable because of the differences between adult and youth programs in their primary goals and objectives, program services, and expected outcomes. There should, however, be provisions added to the legislation that would reduce the administrative burden of duplicative reporting and accounting requirements.

8. Appropriations

The federal expectation for vocational education must be matched with an appropriate federal investment if vocational education is to meet the challenge it continues to face in helping to resolve the nation's economic problems. The 1976 legislation charged the vocational education system to help solve the continuing problem of unemployment and underemployment in the United States, particularly as it affects disadvantaged racial and linguistic minorities, handicapped people and women. Yet vocational education's share of the total federal budget for education, training and employment has steadily declined, with appropriations far below authorization levels.

9. Allocations

Funds that represent an entitlement to each state should be mandated by formula but states should be given maximum flexibility in distributing such funds, based on local priorities and needs. However, a minimum of 20% of all funds available to a state under the appropriation should be allocated through targeted grants to: (1) the state's most economically depressed areas, both rural and urban, and/or (2) areas of the state where educational disadvantage, as measured by the particular state, is disproportionately high.

The new Act should not require matching based on the concept contained in the present Act. The one-to-one match was intended to stimulate state and local spending. It has more than succeeded. State and local funds now should be used to support the basic enterprise which has been built. The federal dollars should be used for the improvement and expansion of the basic program. However, since the federal dollars are intended for improvement and enhancement, the state/local support for the basic program should not fall below the level of the federal support. If the state/local portion should shrink to less than the federal contribution, the federal funds should be reduced to a level where the improvement funds do not exceed the basic support funds.

10. Advisory Councils

State Advisory Councils on Vocational Education should be retained, along with the categories of representation specified in Section 105(a) of the VEA. SACVEs guarantee citizen participation in the policymaking process, and represent the interest and concerns of those who are the potential "consumers" of vocational education. Operating autonomously, SACVEs can assume a leadership role in the difficult years ahead, as the vocational education system is asked to help meet the challenge presented by social, economic, technological and demographic changes requiring

new programs, along with the elimination of outmoded ones. As concern with the cost-effective expenditure of public funds increases, those most in need of services and programs must have a voice in the setting of priorities. All citizens must be able to evaluate the effectiveness of the programs their tax dollars are supporting. SACVEs, therefore, are more important than ever.

CHAPTER IV

RESPONSES TO THE RECOMMENDATIONS CONTAINED IN THE COUNCIL'S 1980 ANNUAL REPORT

RECOMMENDATION #1 – PLANNING

THAT THE BOARD OF EDUCATION REVIEW AND REVISE THE STATE PLAN FOR VOCATIONAL EDUCATION TO REFLECT WHAT THE FUTURE FOR VOCATIONAL EDUCATION LOOKS LIKE NOW IN LIGHT OF THE EFFECTS OF PROPOSITION 2½.

Response:

The development of the new, long-range State Plan will commence in the fall of 1981, pending instructions from the U.S. Department of Education. The Division of Occupational Education will assess, to the extent possible, the effects of Proposition 2½ for the adjustment of program priorities and goals in its long-range State Plan.

RECOMMENDATION #2 – PLANNING

THAT THE DIVISION OF OCCUPATIONAL EDUCATION AND THE ADVISORY COUNCIL ON VOCATIONAL-TECHNICAL EDUCATION HOLD A SERIES OF CONFERENCES WITH LOCAL EDUCATION AGENCIES AND LOCAL ADVISORY COUNCILS TO DISCUSS LONG-RANGE PLANNING FOR VOCATIONAL EDUCATION THROUGH THE 1980'S.

Response:

The Division of Occupational Education will develop a local planning process that will bring together a significant number of school districts to discuss long-range planning for vocational education. The Division intends to begin such comprehensive planning, at least on a pilot basis, during Fiscal Year 1982. The Division accepts the recommendation that the State Advisory Council and the Local Advisory Councils be involved in this long-range planning process.

RECOMMENDATION #3 – EVALUATION

THAT THE DIVISION OF OCCUPATIONAL EDUCATION DEVELOP AN EVALUATION MODEL FOR FEDERALLY FUNDED PROGRAMS, FOR USE BY LOCAL EDUCATION AGENCIES TO:

- A. ASSESS THE SUCCESS OF PROGRAM RESULTS IN TERMS OF THE GOALS AND OBJECTIVES SET FORTH IN THE STATE PLAN;
- B. ASSESS THE RELEVANCY OF THE LOCAL EDUCATION AGENCIES' RANGE OF OFFERINGS TO LABOR MARKET NEEDS AND TO STUDENT NEEDS; and
- C. INCORPORATE EVALUATION RESULTS INTO THE PLANNING PROCESS.

Response:

The Division of Occupational Education is currently developing a process for the comprehensive and uniform evaluation of vocational programs supported by state, federal and local funds. One of the fundamental purposes of the evaluation is to compare the relevant range of offerings to labor markets and student needs. The results of the evaluation will be used to assist the schools in planning for program improvement. In addition, the quantitative and qualitative statement results will be available for state planning purposes and for an assessment of the extent to which the State Plan's goals and objectives are being met.

RECOMMENDATION # 4 – ACCOUNTABILITY REPORT

THAT THE DIVISION OF OCCUPATIONAL EDUCATION DEVELOP A SEPARATE ACCOUNTABILITY REPORT, IN ADDITION TO THE COMPLIANCE DOCUMENT, WHICH GOES FAR BEYOND THE COMPLIANCE REPORTING REQUIRED BY P.L. 94-482, AND IS UNDERSTANDABLE TO THE GENERAL PUBLIC.

Response:

The Division of Occupational Education believes that the augmented Annual Accountability Report that is being developed for Fiscal Year 1980 approximates more closely the type of document recommended by the State Advisory Council.

RECOMMENDATION #5 – ACCESS

THAT THE BOARD OF EDUCATION DEVELOP A POLICY UNDER WHICH SIGNIFICANT INCENTIVES ARE OFFERED TO THOSE SCHOOL SYSTEMS IMPROVING THEIR ENROLLMENT OF MINORITIES IN TECHNICAL SKILLS TRAINING PROGRAMS AND IN ADMINISTRATIVE AND TEACHING POSITIONS.

Response:

The Division of Occupational Education has acted for the Board to provide incentives to school districts to increase minority staffing and student enrollments in vocational education: federal funds for both programs and professional development. The recommendation that additional incentives be provided to school districts that have demonstrated improvement in minority and female staffing and student enrollments is a positive one, and will be included in the development of the new long-range State Plan.

RECOMMENDATIONS #6 THRU #9 – TARGETING ENROLLMENT AND FUNDS

THAT THE STATE PLAN SUGGEST *ENROLLMENT TARGETS* FOR DISADVANTAGED BLACK YOUTH BASED ON THEIR NUMERIC REPRESENTATION IN THE GEOGRAPHIC DISTRICT BEING SERVED.

THAT THE STATE PLAN SUGGEST *ENROLLMENT TARGETS* FOR DISADVANTAGED HISPANIC AND OTHER LINGUISTIC MINORITY YOUTH BASED ON THEIR NUMERIC REPRESENTATION IN THE GEOGRAPHIC DISTRICT BEING SERVED.

THAT THE STATE PLAN CLEARLY IDENTIFY *DOLLAR AMOUNTS* TO BE TARGETED TO DISADVANTAGED BLACK YOUTH.

THAT THE STATE PLAN CLEARLY IDENTIFY *DOLLAR AMOUNTS* TO BE TARGETED TO DISADVANTAGED HISPANIC AND OTHER LINGUISTIC MINORITY YOUTH.

Response:

The Division has implemented a new monitoring system for program access in all occupational areas for minority, handicapped, disadvantaged, limited English proficient and female populations in all school systems, not just selective secondary schools. In the case of Chapter 74 programs, enrollment patterns are now being examined at the six digit O.E. Code level, to ensure adequate representation of all populations. Our Methods of Administration for the Office for Civil Rights contains specific details of these activities and methodologies. Assurance of access to ongoing federally funded programs has increased as a result of the development of an enrollment remediation plan. Recipients whose actual program access for minority, disadvantaged, handicapped, limited English proficient or female populations falls significantly below planned patterns are required to file this remediation plan. These plans must be reviewed and approved for such programs to be allowed to continue.

RECOMMENDATION #10 – ACCESS TO PROGRAMS

THAT INSTRUCTIONS FOR COMPLETING THE LOCAL PLAN STRESS THE NEED FOR ACCESS TO ALL OCCUPATIONS FOR DISADVANTAGED BLACK YOUTH.

Response:

The problems concerning access for all priority populations have centered on the need to increase program offerings and eliminate barriers to vocational education in general. Now that increasing numbers of the underserved populations are receiving vocational training there is a further need to examine the types and quality of program offerings, and to ensure access to all occupations for Blacks and other minority students. The revisions of the Local Plan must reflect these concerns.

RECOMMENDATION #11 – TERMINOLOGY

THAT THE TERM "DISADVANTAGED BLACK YOUTH" BE USED CONSISTENTLY, WHERE APPROPRIATE, THROUGHOUT THE STATE PLAN; THAT THE TERM "MINORITIES" BE EXPANDED TO INCLUDE "MINORITIES OF BOTH SEXES"; AND THAT THE TERM "WOMEN" BE EXPANDED TO INCLUDE "WOMEN OF ALL ETHNIC GROUPS."

Response:

This recommendation will be included in the development of the new long-range State Plan.

RECOMMENDATION #12 – REPRESENTATION IN PLANNING

THAT THE DEPARTMENT OF EDUCATION TAKE STEPS TO ENSURE APPROPRIATE REPRESENTATION OF BLACKS, HISPANICS AND OTHER LINGUISTIC MINORITY GROUPS, AND WOMEN OF ALL ETHNIC GROUPS, AT EVERY LEVEL OF THE PLANNING PROCESS FOR VOCATIONAL EDUCATION.

Response:

The local planning process for the development of the new long-range plan will involve a significant number of school districts. The Division will cooperate with the State Advisory Council to ensure that Blacks, Hispanics and other linguistic minority groups, and females of all ethnic groups are appropriately represented through local education agencies and advisory councils.

RECOMMENDATION #13 – SPECIAL NEEDS STUDENTS

THAT THE VOCATIONAL PROGRAM OFFERINGS FOR SPECIAL NEEDS STUDENTS AT COMPREHENSIVE HIGH SCHOOLS BE INCREASED THROUGH UTILIZATION OF MONIES AVAILABLE THROUGH JOINT FUNDING.

Response:

The Division has established and implemented the following general policy with regard to special needs students: in order to be eligible to receive funds from *any* source, an applicant must address the needs of the handicapped; a minimum dollar amount must be spent for this population before funds will be awarded for other programs (Local Planning Booklet, p. 3). The purpose of the joint Occupational Education and Special Education Projects is to increase access for special needs students to Chapter 74 approvable programs at the secondary level. Comprehensive schools are eligible for joint funding; indeed, some 70% of the local education agencies presently receiving joint funds are comprehensive secondary schools.

RECOMMENDATION #14 – COMMUNITY BASED ORGANIZATIONS

THAT COMMUNITY BASED ORGANIZATIONS RECEIVING SUPPORT FROM VOCATIONAL EDUCATION MONIES BE ENCOURAGED TO UTILIZE SPACE IN LOCAL EDUCATION AGENCIES, WHERE NECESSARY EQUIPMENT IS ALREADY IN PLACE.

Response:

The Board of Education recognizes the unique attributes of community based organizations, and encourages the use of their resources through contractual arrangements utilizing Federal Vocational Education Act funds. It is the position of the Board that community based organizations should focus their educational efforts associated with school-aged youth primarily on *supplementary* educational services. It remains the Board's position that primary responsibility for comprehensive occupational education rests with public school districts. Existing state-aid programs, for which only school districts are recipients, are designed to implement and sustain over time such comprehensive occupational education programs.

RECOMMENDATION #15 – SEX EQUITY

THAT THE DIVISION OF OCCUPATIONAL EDUCATION COMPILE AND DISSEMINATE, AT LEAST ANNUALLY, DETAILED DATA ON SEX EQUITY IN VOCATIONAL PROGRAMS, INCLUDING INFORMATION ON TEACHERS AND ADMINISTRATORS.

Response:

The Annual Accountability Report for Fiscal Year 1981 will include information recommended by the State Advisory Council. Detailed information regarding enrollment by sex first became available during Fiscal Year 1980. Consequently, data showing change by year will be given beginning with the Accountability Report for next year. Furthermore, the Final Program and Appraisal Report for P.L. 94-482 grants will be modified to collect information regarding the sex of staff paid with federal money in ensuing years.

RECOMMENDATION #16 – SEX EQUITY

THAT THE DIVISION OF OCCUPATIONAL EDUCATION CLOSELY MONITOR ENROLLMENTS IN TECHNICAL PROGRAMS TO DETERMINE IF FEMALE ENROLLMENTS ARE INCREASING.

Response:

The first Office for Civil Rights Compliance Review data analyses are nearly completed for the 1980-1981 school year; they present enrollment by sex in each Chapter 74 program for each local education agency. In addition, the Division has funded a study of attitudes of female students (seniors and first-year graduates) who have chosen non-traditional areas of study. The Division also has modified its Admissions Update process to enable more accurate analysis and monitoring of enrollment trends among females. First, a site visit will be made to each selective school this year to verify submitted information. Second, the Division will begin, in October 1981, to collect application/acceptance/enrollment figures on the Individual School Report, thus creating computer-analyzable data.

RECOMMENDATION #17 – SEX EQUITY

THAT THE BOARD OF EDUCATION PLACE EVEN GREATER EMPHASIS ON THE NEED FOR RECRUITMENT, COUNSELING AND SUPPORT SERVICE PROJECTS DESIGNED TO OVERCOME SEX BIAS AND STEREOTYPING IN OCCUPATIONAL EDUCATION.

Response:

In addition to the projects mentioned elsewhere in this Report and in previous reports which address the concerns raised by the State Advisory Council, the Division has undertaken several other significant projects. For example, a female (who graduated from a non-traditional program in a vocational technical school) has been hired to establish, and provide technical assistance to peer-support groups for students enrolled in non-traditional programs. In addition, the Division has funded a Curriculum Resource Center at Minuteman Regional Vocational Technical School that collects exemplary and innovative sex-fair materials for career education and occupational education. The Division also has begun a program to recruit and train female vocational educators in non-traditional fields.

RECOMMENDATION #18 – STUDENT SURVEY

THAT THE DIVISION OF OCCUPATIONAL EDUCATION CONDUCT A SURVEY OF DISADVANTAGED BLACK AND HISPANIC YOUTH IN BOSTON TO DETERMINE THEIR ATTITUDES TOWARD VOCATIONAL EDUCATION AND WHAT MOTIVATES THEM TO CHOOSE THE TRAINING PROGRAMS THEY DO ELECT.

Response:

The Division of Occupational Education, which already has undertaken several attitudinal studies in related areas, is interested in the State Advisory Council's recommendation. The Division agrees with the State Advisory Council that there has been a tendency to focus on systemic factors, when attempting to understand why underserved groups are not taking advantage of vocational education opportunities in Massachusetts, and not to pay sufficient attention to social and attitudinal factors. The Division is convinced that it will not be possible to affect student choices until student motivation is better understood. Indeed, the Division would like to expand the State Advisory Council's suggestion to include a carefully determined sampling of the Commonwealth's Black and Hispanic youth.

RECOMMENDATION #19 – PROFESSIONAL DEVELOPMENT

THAT THE BOARD OF EDUCATION CONTINUE TO SUPPORT, AT ADEQUATE LEVELS, THE CURRENT EFFORTS TO RECRUIT AND TRAIN BILINGUAL AND BLACK VOCATIONAL INSTRUCTORS.

Response:

The Board of Education continues to support its efforts to recruit and train bilingual and Black vocational instructors. In addition, the Division has begun to establish a similar program to recruit and train female vocational education instructors.

RECOMMENDATION #20 – LOCAL ADVISORY COUNCILS

THAT THE DIVISION OF OCCUPATIONAL EDUCATION, WITH THE ASSISTANCE OF THE STATE ADVISORY COUNCIL, PROVIDE GREATER TECHNICAL ASSISTANCE TO LOCAL ADVISORY COUNCILS IN INTERPRETING THEIR ROLE IN THE VOCATIONAL EDUCATION DELIVERY SYSTEM IN THE COMMONWEALTH.

Response:

The Division of Occupational Education endorses the concept that local advisory councils are a valuable tool for program evaluation and planning, and would like to develop, in cooperation with the State Advisory Council, a viable method for promoting and advising the local advisory councils.

The Division takes the position that its primary responsibility toward the local advisory councils is monitorial, and toward this end the Division is establishing a method for regular, periodic identification and assessment of the local advisory councils and is further considering ways to involve the local advisory councils and craft councils in its program evaluation process.

However, it is the responsibility of the State Advisory Council under federal law to provide the requisite technical assistance to the local advisory councils. The Division will, at anytime, share its data with the State Advisory Council in order to enhance the capacity of the State Council to provide such technical assistance to the local councils.

APPENDIX A

DATA

TABLE A-1

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MASSACHUSETTS 1979-80 SCHOOL YEAR
ENROLLMENT in OCCUPATIONAL EDUCATION PROGRAMS, STATE (CH. 74) and FEDERAL (P.L. 94-482),
by PROGRAM AREA and LEVEL, and by SEX

Program Area	Total	Secondary	Post-Secondary	Adult	Below Grade 9	Male	Female
Agriculture	3,230	1,801	451	978	-	2,036	1,194
Distribution	9,083	6,536	1,153	1,394	-	3,425	5,658
Health	7,933	2,416	4,756	761	-	1,041	6,892
Occupational Home Economics	7,865	7,034	715	116	-	1,593	6,272
Technical	8,667	1,403	4,584	2,680	-	6,274	2,393
Trade and Industrial	59,243	44,476	1,392	13,375	-	48,866	10,377
Office	89,523	75,472	8,043	6,008	-	25,377	64,146
Home Economics	68,893	35,078	-	5,259	28,556	15,893	53,000
Industrial Arts	86,672	54,587	-	706	31,379	70,998	15,674
Other	8,012	2,180	-	5,832	-	1,999	6,013
TOTAL	349,121	230,983	21,094	37,109	59,935	177,502	171,619

Source: Massachusetts Division of Occupational Education

TABLE A-2

MASSACHUSETTS 1979-80 SCHOOL YEAR
DISTRIBUTION of OCCUPATIONAL EDUCATION STUDENTS in COMPREHENSIVE and VOCATIONAL HIGH SCHOOLS,
by SEX and RACIAL/ETHNIC GROUP, and by PROGRAM AREA

Program Area	Total		Am. Ind. / Alaskan Native		Asian Am. / Pac. Isl.		Black, Not Hispanic		Hispanic		White, Not Hispanic	
	M	F	M	F	M	F	M	F	M	F	M	F
Agriculture	1,976	8	3	5	1	43	32	18	13	1,239	614	
Distribution	6,303	0	1	2	4	111	205	37	47	2,498	3,398	
Health	2,431	0	4	0	4	48	225	11	102	1,157	1,880	
Occ. Home Economics	7,214	9	23	4	18	37	121	24	147	1,416	5,415	
Technical	1,493	0	1	1	0	28	4	20	18	983	438	
Trade and Industrial	49,530	25	10	69	13	1,545	542	841	244	34,290	11,951	
Office	74,111	10	32	43	136	1,122	2,119	272	494	18,435	51,448	
Home Economics	51,249	9	20	46	120	549	1,381	117	542	11,746	36,719	
Industrial Arts	76,264	32	5	247	104	1,325	512	509	129	59,984	13,417	
Other	1,998	0	0	1	2	20	27	8	16	1,011	913	

Source: Massachusetts Division of Occupational Education.

Note 1: Occ. Home Economics and Industrial Arts figures include grades 7 and 8.

Note 2: Racial/Ethnic groups by sex do not add to "total" due to inconsistencies by schools in reporting data.

TABLE A-3

FY 1980 P.L. 94-482 PROGRAM FUNDING

<u>Board of Education Approval Date</u>	<u>Number of Programs</u>	<u>Grants - \$</u>
May 30, 1979	81	\$ 1,913,594
June 28, 1979	84	1,524,258
June 28, 1979 (Joint HDCP)	40	1,109,261
July, 1979	115	1,542,997
August 28, 1979	164	2,572,744
September 25, 1979	120	2,501,300
October 23, 1979	93	1,954,583
November 27, 1979	111	1,901,287
December 18, 1979	<u>30</u>	<u>1,239,784</u>
TOTALS	838	\$16,259,808

Source: Massachusetts Division of Occupational Education

TABLE A-4

MASSACHUSETTS SUMMARY of FISCAL YEAR 1980 FUNDING (PUBLIC LAW 94-482)

Region	Number of Eligible LEAs	Number of LEAs Submitting	Total Projects Submitted	Total Projects Funded	Amount of Funds by Subpart		Total of Region		
					2	3	4	5	
I Greater Boston	42	39	194	179	\$2,342,675	\$ 399,383	\$224,514	\$ 370,085	\$ 3,336,657
II Northeast	55	47	185	175	1,703,693	264,187	137,400	297,553	2,402,833
III Central Mass.	60	49	182	134	1,387,402	181,640	65,000	127,986	1,762,028
IV Southeast	57	34	115	93	1,547,766	148,467	102,780	149,647	1,948,660
V Springfield	24	24	79	71	1,428,635	244,473	344,199	251,412	2,268,719
VI Pittsfield	<u>18</u>	<u>18</u>	<u>53</u>	<u>41</u>	<u>390,055</u>	<u>49,277</u>	<u>-0-</u>	<u>54,400</u>	<u>493,732</u>
STATE TOTAL	256	211	808	693	\$8,800,226	\$1,287,427	\$873,893	\$1,251,083	\$12,212,629
COMMUNITY COLLEGES	16			49	\$1,558,705				
									\$1,558,705

TABLE A-5

MASSACHUSETTS EXPENDITURES DURING FISCAL YEAR 1980

	State/Local Estimated Expenditures FY 1980	P.L. 94-482 Reported As Expended From 7-1-79 thru 6-30-80	
		FY 1980 Funds	FY 1979 Funds
<u>Basic Grant Programs (Section 120)</u>			
<u>Vocational Education</u>			
Handicapped	\$ 7,444,697	\$ 790,067	\$1,071,609
Disadvantaged	3,989,409	1,360,996	2,215,562
Limited English Proficiency	679,188		74,508
Postsecondary	36,723,562	506,072	1,757,518
Other Students	110,611,921	1,030,110	889,694
Cooperative	2,104,674		153,901
Construction	23,000,000		
Industrial Arts	21,325,344	44,023	130,523
Displaced Homemakers	(Incl. PS/Adult)	42,168	137,518
Interagency Industry Specific	(Incl. PS/Adult)	79,824	68,024
Sex Equity Personnel	(Incl. Admin.)	60,000	
Local Administration	5,757,540		
State Administration	902,158	810,266	
(Section 120, 130, 140)			
 SUBTOTAL	 \$212,548,493	 \$4,723,526	 \$6,498,857
<u>Program Improvement and Supportive Services (Section 130)</u>			
Exemplary Innovative	\$ 136,424	\$ 457,339	\$ 300,000
Curriculum Development			103,204
Research			111,902
Guidance/Counseling	6,746,377		622,244
Personnel Training	20,672		165,063
Sex Bias Grants	49,805		24,739
State Administration	225,539	202,567	
 SUBTOTAL	 \$ 7,178,817	 \$ 659,906	 \$1,327,152
<u>Special Programs for the Disadvantaged (Section 140)</u>			
Disadvantaged			\$ 490,793
 SUBTOTAL	 \$ 490,793		
<u>Consumer and Homemaking Education (Section 150)</u>			
Non Economically Depressed Areas	\$ 4,200,600	\$ 30,000	\$ 195,702
Ancillary	50,380		
Economically Depressed Areas	11,125,011	134,387	450,000
Ancillary	302,005		
State Administration & Ancillary	35,000	150,000	
 SUBTOTAL	 \$ 15,712,996	 \$ 314,387	 \$ 645,702
GRAND TOTAL	\$235,440,306	\$5,697,819	\$8,962,504

TABLE A-6

MASSACHUSETTS FY 1980
STATE/LOCAL FUNDS USED FOR MATCHING & MAINTENANCE OF EFFORT

<u>Estimated Fiscal year 1980 State/Local Expenditures</u>	<u>Laws/Regulations/Policies Governing Use of State/Local Funds in Accord With Federal Conditions & Requirements</u>
Full-time Occupational Day \$113,275,881)
Disadvantaged (Excess Costs) \$3,989,409)
Postsecondary/Adult (Chapter 74) \$6,723,562)
Guidance and Counseling \$6,746,377)
Community Colleges \$30,000,000	Joint Policy on Occupational Education
Construction of Vocational Facilities \$23,000,000	Chapter 645 - Acts of 1948 as Amended
Handicapped Vocational (Excess Costs) \$7,444,697	Chapter 766 and Board Policy
Limited English Proficiency (Excess Costs) \$679,188	Chapter 71A and Board Policy
Consumer and Homemaking \$15,325,611	Chapter 70 and Board Policy
Industrial Arts \$21,325,344	Chapter 70 and Board Policy
Administration <u>\$6,930,237</u>	
TOTAL \$235,440,306	

TABLE A-7

FEDERAL vs. STATE and LOCAL SUPPORT for PUBLIC VOCATIONAL PROGRAMS in MASSACHUSETTS
DURING 1972-1981

Fiscal Year	Federal Dollars In Millions	% Of Total Voc. Ed. Funds	% Change From Previous Year	State/ Local \$ In Millions		% Of Total Voc. Ed. Funds	% Change From Previous Year	Total Voc. Ed. \$ In Millions	% Change From Previous Year
				State	Local				
1972	\$10.2	8.0%	5%	\$119	92%	6%	6%	\$129	6%
1973	12.6	8.7%	23%	133	91.3%	12%	145	13%	
1974	15.3	9.1%	21%	152	90.9%	14%	167	15%	
1975	13.0	7.0%	-16%	173	93%	14%	186	37%	
1976	14.4	6.2%	11%	217	93.8%	25%	232	24%	
1977	14.0	5.6%	-3%	237	94.4%	9%	251	8%	
1978	14.8	5.5%	6%	251	94.5%	6%	266	6%	
1979	15.3	5.5%	3%	265	94.5%	6%	280	5%	
1980	16.7	5.7%	9%	275	94.3%	4%	292	2%	
1981	19.4								

APPENDIX B

EXCERPTS FROM THE COMMONWEALTH OF MASSACHUSETTS
ANNUAL ACCOUNTABILITY REPORT
FOR
VOCATIONAL EDUCATION
FISCAL YEAR 1980

Summary Program Descriptions

The effectiveness of vocational education programs for Fiscal Year 1980 can be demonstrated through the descriptive evaluations of the following program areas: (1) planning and operational processes, (2) results of student achievement, (3) results of student employment success, (4) services to special populations, and (5) special data on completers and leavers.

The following programs were favorably evaluated and considered very successful. However, during regular monitoring and evaluation phases, if any programs were perceived as deficient, remedial action would have ensued. If the remediation was unsuccessful, the final report would have indicated any aspects of the program which failed to meet program expectations. In this way, program information was used to improve programs.

1. Planning and operational processes

Exemplary vocational programs throughout Massachusetts listed in the following areas illustrate the effectiveness of planning and operational processes in: (a) quality and availability of instructional offerings, (b) guidance and counseling and (c) employer participation in cooperative programs of vocational education.

a. quality and availability of instructional offerings

- (i) The High Technology Institute for Educational Personnel at Joseph Keefe Technical High School enabled teachers facing job loss to retrain for applications computer programmers. The field of computer programming was selected because it was one of Massachusetts' most pressing needs for employment in the high-technology industries.

The 30 hour per week program retrained 34 teachers in 26 weeks. The completion rate as 100%, and the average starting salary for retrained teachers was \$18,000, five thousand dollars more than their average salaries as teachers.

(ii) The Massachusetts Vocational Curriculum Resource Center at Minuteman Regional Vocational-Technical School has been successful in assisting vocational educators locate and understand available curriculum materials. The primary goal of the Center was to collect and disseminate curriculum resources pertaining to vocational education, bilingual vocational education, special education in vocational education, and sex equity in vocational programs.

The collection now consists of 1,871 volumes. A computerized catalog format has been developed. An awareness brochure was published and disseminated to approximately 7,000 vocational educators. Center staff have visited several school systems, and the Center has hosted a number of group visits from both state and local offices and schools.

(iii) The High Technology Programs provided 1,000 hours of training to underemployed and unemployed individuals for the position of computer electronic technician. The curriculum was developed by three area computer firms. This program was particularly significant because of the range of options available to participants upon completion of the training. Because of the strong need for technicians in the industry presently, and projected for the future, special arrangements were made between the Board of Regional Community Colleges and participating vocational schools to allow program completers one year of credit toward an Associate Degree in Electronics Technology. As a result, at the completion of training, program participants had the following choices: 1) immediate employment with the training company in the entry level position of test technician, 2) employment in this position combined with part-time community college study toward an Associate Degree, and 3) full-time college study toward an Associate Degree.

On-site technical assistance and evaluation were provided by regional and central Department staff. Project GET (Graduate Electronic Technicians) at the Greater Lowell Regional Vocational School was cited for a fair, carefully designed selection procedure which resulted in admission to the program of well informed, highly motivated individuals. Further evidence of the program's quality was the high rate of completion and placement considered successful by trainees and employers.

(iv) Interagency industry specific programs provided short term training skills in response to an identified industry's request for trained personnel and in response to the training needs of the unemployed. The recruitment sources for program participants were the Division of Employment Security and local CETA agencies. Selection processes were developed jointly by the collaborating company and school. Particular emphasis was given to the recruitment and enrollment of women in non-traditional training areas.

After an occupational category with a high and continuing need for trained personnel had been identified, the participating school and company jointly developed a one-year curriculum to provide training in the needed skill.

During Fiscal Year 1980, eight programs were funded. Training was provided in occupations related to the textile and jewelry trades as well as several related to the high technology industry. Through on-site evaluations, regional and central Department staff identified several programs which were successful in recruiting, training,

and placing the unemployed in positions such as electronic technicians, field service technicians and keyboard operators. The Springfield Community College program for electronic technicians was cited for particular success in the rate of completion and successful placement of its graduates.

(v) The Commonwealth Inservice Institute funded inservice education programs during the 1980 Fiscal Year in the following areas: adult education, basic skills, career education, gifted and talented, occupational education and special education. The funded programs were designed to bring about improvement in educational services. The Institute worked through six Regional Education Centers of the Department, and was coordinated through the Department's central office in Boston. The operations in each region were monitored by a subcommittee of the Regional Education Council, a majority of the members of which were classroom teachers.

The initiative for Institute programs rested with school personnel who, as a group, had an objective and a plan to meet that objective through inservice education. The Institute funded programs which: 1) were designed by and for school staffs, 2) were designed to improve classroom teaching or specific educational services in a school or department, 3) were actively supported by the administration of the local system, and 4) met local needs and promoted federal and state priorities.

(vi) In order to increase the number of available black vocational instructors in the Commonwealth, the Division of Occupational Education funded programs at two state colleges to cover the recruitment and training of minority vocational instructors.

Westfield State College recruited a total of twenty-eight (28) black men and women who met the basic credential requirements. The program utilized an adapted Competency Based Vocational Teacher Education (CBVTE) program of instruction. Two of the teacher trainers were vocational instructors in area schools and assisted in the placement effort.

Boston State College recruited a total of forty-two (42) black vocational teacher trainees with assistance from the city of Boston's recruitment effort for the new Occupational Resource Center. All of the program's teacher trainers were minorities actively engaged in vocational education in area schools.

(vii) The Industrial Arts Curriculum Program at the Worcester Public Schools was designed as a pre-vocational program to serve 300 junior high school students in 5 urban junior high schools. The implementation of the program at the Chandler Junior High School was noteworthy because of a significant modification of the standardized curriculum package by a dedicated teacher, and the realistic adaption to students' needs in relationship to time and facility constraints. The program's major focus was to introduce the students to the many job options in the fields of construction and manufacturing.

There were three components of the program emphasizing: 1) learning by application of basic knowledge and skills, 2) developing practical skills in career decision-making, and 3) job explanation through community participation. Chandler's implementation of the program was significant

because of the coordinated support among the administration, staff and students. Characteristic of the program was a very special relationship between the teacher and the students; both seemed to benefit from their participation. One major program benefit was the overall accommodation of students' schedules within the overall curriculum design at Chandler.

The project was further enhanced by outstanding presentations which were developed and designed by the teacher. Additionally, unique supplementary instructional materials were developed: pictures, bulletin boards, charts, and models. The program's successful first year resulted in the school district's serious consideration of secondary program modifications.

(viii) In its initial year of operation, the Computer Electronics Post-secondary training program at Assabet Valley Regional Vocational Technical High School was designed to serve 20 students. Its instructional strategy compressed training of computer electronics technicians into one year. Training components comprised a minimum of 1,000 hours with an additional 500 hours of cooperative work experience for those who so chose. Successful completers received vocational certificates where applicable. In addition to those who desired to further their education, these completers could receive 22 college credits by continuing their formal education at Quinsigamond Community College.

The need for the program stemmed from identified needs to train these technicians because of a serious shortage of computer electronic technicians in the high technology companies. Therefore, the proposed curriculum for the program was developed cooperatively with the high technology industry.

During the first year of the program, 22 of the students who applied were accepted. A second phase of the program was funded for Fiscal Year 1981 because of the program's success and need.

(ix) During the last week in June of 1980, Fitchburg State College managed a 30 hour "Professional Improvement Conference for Vocational and Occupational Educators" organized around 33 specific field workshops. The purpose of this conference was to upgrade and update both the occupational skills and the teaching, counseling and administrative abilities of vocational educators. At this conference, the entire range of issues and programs related to Public Law 94-482 was addressed by program participants.

Over 800 vocational program personnel and approximately 150 representatives of industry, business, government, and higher education participated in the 1980 conference. Most of the vocational program personnel in attendance qualified for a 30 hour certificate which could be used to meet part of the state requirement for professional improvement.

(x) The Computer Literacy Program at Minuteman Regional Vocational High School served 756 students, 25% of whom were female and 38% handicapped. The purpose of the program was to allow for the integration of microcomputers into the vocational and related programs at Minuteman, and to provide skills training in the microcomputer field. The special features of this program included the approach of using microcomputers in individualized instruction in the areas of basic skills and related subject areas, and the use of microcomputers for occupational counseling.

b. guidance and counseling

- (i) At McCann Technical School, the purpose of the vocational support instructor program was to provide supportive instruction and counseling for handicapped and disadvantaged students experiencing difficulty following transfer into vocational programs (grades 10, 11, and 12). In total, 34 students were served. The support instructors accompanied these students to classes, offering constant support, guidance and counseling. One measure of this program's success was a higher student retention rate following the program's inception.
- (ii) Project LIFE (Liasons in Family Education) provided students in Rockport High School a one semester senior family life elective ("Life Styles") which dealt with the problems of living in the adult world. The course used many instructional techniques such as lectures, discussions, simulations, socio-dramas, media, guest lecturers and several unique field trips. One of the biggest problems for the course was controlling the number of students who wanted to enroll in the class.

The course was taught both by a male and a female instructor; thus, providing a point of view that could be related to by both sexes and encouraging both boys and girls to take the course. Another special feature of the course was that students went through many life simulations: engagement, marriage, shopping for food, looking at a house to buy, funeral preparations, banking and learning about natural child birth.

Each activity required couples to be established. One of the more elaborate activities concerned marriage. The couples prepared for a simulated marriage with the usual pre-marriage preparation and decisions. Flowers, tuxedos and cakes were donated by local merchants, and a local clergyperson from the community performed the ceremony. Ceremonies have attracted more than 100 guests including parents and friends of students.

- (iii) The Massachusetts Board of Education, recognizing that the local school districts were responsible for making comprehensive occupational education programs available to school age youth and that Community Based Organizations could be an effective participant in that effort, adopted a policy in December of 1979, which permitted funding Community Based Organizations to provide supplemental and support services to disadvantaged youth enrolled in regular occupational education programs. As a result of this policy, eleven Community Based Organizations were awarded contracts to work with local school districts in providing remedial education, vocational guidance and counseling, dropout prevention and outreach activities to more than 300 disadvantaged learners in Boston and Worcester.

The typical project was cooperatively funded by Occupational Education and CETA. Students were paid, while obtaining work experiences, with funds from CETA. Occupational Education provided funds for remediation, counseling and outreach. The student's educational program began with a diagnostic assessment that reflected his/her aptitudes, interests, academic strengths and latent talents. Following

the development of this profile, the student met with the vocational counselor and instructional staff to discuss job placement and to establish educational goals and objectives. Each student was provided with the opportunity, and criteria, to conduct a fair appraisal of his/her abilities and counseled in ways to overcome any disadvantaged condition he/she might have been experiencing. Work readiness instruction was provided to those students deemed unprepared for employment.

In total, eleven projects were funded during Fiscal Year 1980. Through evaluation, exemplary program components were identified in each project. One outstanding project serving court adjudicated youth, the "Dare Pre-Occupational Education Program", allowed participants to earn high school academic credit during the program. Of the eighteen participating youth, five planned to re-enter the regular school system, five planned to find meaningful employment and eight planned to continue in the special assistance project.

Another project addressed the unique vocational counseling and guidance needs of Native Americans. A two-fold objective was undertaken. The first objective was to prepare the youth for entry into training for employment in non-traditional types of occupations. The second objective was to provide the local school district with information on the type of supplemental and support services required by Native Americans to succeed in a regular vocational education program. The success level of this project will not be known prior to September 1, 1981.

All of the projects had a consumer and homemaking component in which students were instructed on matters of health, safety, communications, socialization, homemaking, family living, working with others, use of leisure time, money management, travel and job preparation. The acquisition of these skills aided the students in developing habits and attitudes for coping with the challenges found in their living and work environments.

c. employer participation in cooperative programs of vocational education

Vocational education cooperative programs provided periods of vocational instruction for pupils in cooperative employment and academic and related instruction at school, as an integral part of their vocational training. The work met the standards of industry or business, and was directly related to the student's training. Cooperative students were paid wages during the work week at the cooperating establishments at a rate reasonably comparable to those paid to other persons doing similar work in the same establishment. The cooperative program was limited to seniors in vocational schools with a three year unit trade program, with the exception that outstanding juniors could engage in part-time cooperative training. Academic and related work had to be average or above before a student was placed into a cooperative training program.

Employer response towards the cooperative program has been very positive. In the area of trade and industry, for example, employers' requests for cooperative students was so overwhelming that it far exceeded the supply of available students. A big boost to the cooperative program has been the new employer-target 50% job tax credit based upon the first year's wages paid to cooperative students. This tax

credit has had a favorable impact regarding employer's request for cooperative students in all vocational areas, but especially so in distributive education.

2. Results of student achievement

Student achievement in many vocational education programs was measured by criterion-referenced tests. In regular trade schools, student achievement was measured by the mastery of a set of basic skills for certification. The adoption of a statewide comprehensive competency based curriculum proposal with minimum competency standards for vocational education is currently under consideration. The implementation of this proposal would set minimum standards for satisfactory performance, which would be uniform, public and measurable. Trade certificates could then be keyed to defined levels of performance.

3. Results of student employment success

Student employment data are currently being collected through the Vocational Education Data System (VEDS) project. The VEDS system will include the follow-up of a sample of both program completers and program leavers; further, it will follow-up the employers of those program completers and leavers who find employment in a field related to their training. VEDS data relating to student employment success are expected to be compiled in the Fall of 1981. Additionally, a project has been funded to measure employer satisfaction with the performance of vocational education students in Massachusetts. Since the study is currently in progress, the findings are pending.

4. Services to special populations

Vocational education programs in Massachusetts were represented among services to the following special populations: (a) women, (b) minorities, (c) handicapped, (d) disadvantaged, and (e) persons of limited English proficiency.

a. women

(i) In Fiscal Year 1980, the displaced homemaking program at Newton North High School achieved a 100% placement record and retention rate during its first year of operation. With continued funding in Fiscal Year 1981, the program size is expected to increase by 50%. Unique in concept and comprehensive in scope, the Newton program offered 20 displaced homemakers a selection of 33 occupational training programs including such diverse areas as: carpentry, electricity, graphic arts and office education. Participants were provided not only counseling and support systems, but also the advantages of being mainstreamed into regular day classes. The 23 week program consisted of a 3 week introductory and exploratory phase, and 20 weeks of training and counseling.

(ii) Implemented over the Summer of 1980, Project SCOPE (Support of Coeducational Occupational Programs in Education) produced a series of four booklets dealing with the concept of a support group for students in nontraditional vocational programs. In June, 1981, Massachusetts plans to disseminate these four booklets as resource materials to assist school compliance with the federal Title IX and Massachusetts Chapter 622 laws which prohibit discrimination on the basis of sex.

Booklets in the Project SCOPE series include: Together We Can, a description of strategies on the facilitation of a support group; A Fair Shot/An Equal Chance, a collection of support group activities; It's Not Funny, It's Illegal a summary of laws guaranteeing equal education and employment opportunities; and Portraits, character sketches of students in nontraditional vocational support groups. This project, interestingly enough, was directed and staffed by students at Shawsheen Valley Regional Vocational Technical High School. The students won the contract under a statewide competitive bidding process.

The Project SCOPE booklets address the overwhelming need for information about the support group concept as it relates to students in non-traditional career programs. The distribution of these booklets will also help develop an increasing awareness of the individual's need for a support system throughout the life process, a process starting from his/her earliest grades of school and extending into midlife. Hopefully, readers of these booklets will find insight and inspiration, thus encouraging true freedom of educational pursuits.

One of the few environments nationwide which has originated and fostered a successful student group is Shawsheen Valley Regional Vocational Technical High School in Billerica, Massachusetts. This school has been and continues to be a pioneer in the application of the concept of a support group to the real problems which its students in nontraditional programs have had to face.

As a direct result of the group's work, the present attrition rate of students from nontraditional shops has been negligible, and the number of new students entering these shops has been significantly increased. For example, prior to the support groups' formation in 1977-1978, only five students out of a schoolwide population of 1,000 were members of nontraditional shops. In its first year of existence, the group numbered nine, but in the following year burgeoned to eighteen members. During the 1979-1980 school year, the number of students enrolled in nontraditional programs rose to twenty-eight. Through their support group involvement, these students strengthened their resolve to remain within and carry through to completion their own particular nontraditional career choices. And perhaps most importantly, they served to encourage other students like themselves to make similar nontraditional choices with every confidence for success.

b. members of minority groups

(i) In Fiscal Year 1980, the community-based guidance, occupational assessment and referral program was implemented by the Urban League of Springfield Inc. through a contract with the Springfield Public Schools. The program was developed to serve in-school youth and out-of-school young adults within the urban areas for whom achievement in occupational education would ordinarily be beyond reach. Consequently, the project operated daily from 8:00 a.m. to 5:30 p.m. serving both groups consistent with Springfield Public Schools dismissal time. Recruitment, referral and supportive coordination were accomplished as a result of the mutual commitment and cooperation of the Springfield Public Schools, Hampden District Regional Skills Center, Department of Youth Services, Job

Corps and various area agencies and industries. Within the 1980 project year, 350 disadvantaged, handicapped and limited English-speaking secondary students and young adults were served, consistent with program objectives providing basic counseling, assessment and referral relative to job placement or skill training.

The project has served 734 participants as indicated by individual entry and assessment folders. The retention rate has been 100% with referrals currently being received through the Springfield Public Schools and other agencies. Based upon an outstanding record, this project was granted an extension in Fiscal Year 1981.

Of the applicants whose files were terminated successfully, twenty (20) are at various stages of job readiness in skills-training programs at the Hampden District Regional Skills Center and Job Corps of Chicopee. Five have been placed in entry-level industrial positions. Others have indicated improvement academically and have gained scholarships for higher education within local technical community colleges. This project which served a predominantly ethnic minority population provides an alternative setting that supplements and greatly extends the services by the local public educational agency.

- (ii) The Boston City Hospital Allied Health Program allowed South Boston High School students to acquire specific skills in health occupations. Ancillary counseling and tutoring support mechanisms were available for bilingual students. The program recruited disadvantaged students, and of the 65 students served, 61% were of minority status. Boston City Hospital had excellent facilities, equipment and resources to conduct the training, and encouraged program completers to continue their training at community colleges. Student attendance records were excellent, and many of the students were placed in jobs at the Boston City Hospital complex upon completion of the program.
- (iii) In an effort to increase the number of competent bilingual vocational instructors available to local school systems, the Division of Occupational Education continued funding for a special vocational personnel development project during Fiscal Year 1980.

Over one hundred (100) individuals who met both the bilingual and the vocational competency requirements were recruited and received training in this program. During the year, two classes operated: (a) twenty-seven (27) Spanish vocational teacher trainees, and (b) eighteen (18) trainees from five different language groups.

This program had many unique components including: support services effort for trainees, a blueprint reading course, and teacher shadow program as a practice teaching element. Thirty-seven (37) past trainees have been placed in teaching positions in Massachusetts.

- c. handicapped persons
 - (i) Funded in Fiscal Year 1980 and continuing in Fiscal Year 1981, the Lower Pioneer Valley Educational Collaborative offered a unique program in Fashion Design and Production Sewing. The program was divided into two segments: the morning class which was a lower-level special-needs program and an afternoon multi-level integrated

program. The morning special needs class, under the direction of an outstanding instructor, developed the self reliance, the interest and the necessary skills to succeed in production positions in local industry. In the first year of the program, six handicapped students enrolled, one of whom was a senior who was placed in local industry. The remaining five students returned the following year for the second year of training.

The afternoon program was a multi-faceted integrated program which provided both the theory and practical experience in the creation and production of clothing and other fabric-related projects. Students became familiar with fashion, color and fabric coordination, clothing construction as well as production sewing. Of the 15 graduates, 5 were employed directly in the field and 10 have gone on to more advanced training in the field.

- (ii) The Independent Living program was designed to serve 120 secondary and special needs students who were evaluated from mildly to severely handicapped in the Worcester Public Schools. The program's purpose was to provide training and skill development in job tasks resulting in increased employability in the areas of food services, general shop construction, workshop procedures and assembly, and domestic services and maintenance. Significant to the program's successful implementation were the support services of a job developer and vocational counselor. Throughout, students were assisted in the development of appropriate work habits and attitudes as well as given opportunities for successful job exploration, training and placement experiences.
- (iii) The MOVE (Module Occupational/Vocational Exploratory) Program at Assabet Valley Regional Vocational Technical High School was designed to provide vocational training for 60 special needs students in six area high schools in the Assabet Valley Region. The participating schools were paired (Marlborough and Hudson, Shrewsbury and Berlin/Boylston Regional, and Westborough and Northborough/Southborough Regional) with each dyad sharing a staff pairing. Vocational and special education instruction was provided at each school with specialized training in community work sites during the second half of the year. Vocational training covered the areas of food services, painting and decorating and small appliance repair. Involved in all decision-making processes regarding the program was the Advisory Board comprising high school, vocational school, and community agency (CETA, OFC, etc.) representatives. The Assabet Valley Special Needs Collaborative was responsible for the administration and implementation of the program. The program stemmed from a joint Special Education (94-142) and Occupational Education (94-482) combined funding effort which was recommended for continued support during Fiscal Year 1981.
- (iv) The Beverly Public Schools in conjunction with Swampscott, Marblehead, Rockport, Manchester, Lynnfield, and Masconomet School Districts collaborated in a project making available to handicapped and disadvantaged students vocational options not necessarily available in home schools. Project VOTE (Vocational Options for Training and Employment), an outstanding collaborative effort, provided almost 500 handicapped and disadvantaged students from

the seven participating school districts with a variety of vocational options not available in each school system. Special assistance for handicapped and disadvantaged secondary students was available in the areas of: Food Occupations, Health Aide, Data Processing, Child Care, Carpentry, Automotive, Business Skills and Farming.

d. disadvantaged persons

(i) In Fiscal Year 1980, the electronic technician program at Putman Vocational Technical High School at Springfield served 60 disadvantaged and limited English proficiency students, as well as regular grade 10 and 11 students. The one-half day, three year sequential vocational skills program was innovative because its implementation projected the addition of progressive shops, instructors and equipment in successive funding years to meet a planned enrollment of 90 students being served in 10, 11 and 12th grade shops. Currently, the program serves approximately 90 students. The course of study for each grade was developed sequentially, providing students with progressive skills training to obtain positions in the electronic service industries or to enter technical college programs for advanced training. Fiscal Year 1981 includes the project's first senior division. Eighty percent have commitments for employment with area electronic service and computer assembly and design firms. Four will acquire advanced training at Springfield Technical Community College.

(ii) In Fiscal Year 1980, the machine shop skills program at Springfield-Hampden County Regional Skills Center contracted through the Springfield Public Schools to serve 36 disadvantaged, limited English proficiency and handicapped adults and students. Actual enrollment exceeded planned by 17%. Participants included Classical High School students who received skills training three and one half hours daily after school. Retention rate in total has been 100%. Ninety-two percent (92%) of the participants were placed within the machine trades. Two students will continue in advanced machine training at Springfield Technical Community College.

The project provided 600 total hours of skills training, related theory and counseling over a period of 30 weeks.

(iii) In Fiscal Year 1980, the construction and renovation program at Putnam Vocational Technical High School served 30 disadvantaged, limited English proficiency and regular grade 10 students in the carpentry skills area. An additional 45 students from electricity, heating and air conditioning, painting and decorating, cabinet making and drafting utilized their skills in various stages of the project. This unique project incorporated the full range of structural construction trades at Putnam Vocational Technical High School in rehabilitating abandoned and burnt-out but salvageable, urban dwellings. Upon renovation, the structures were purchased by low income urban families under low interest, supplemental mortgages.

In school year 1980-81 the project provided 60 disadvantaged and regular students within the carpentry program with actual job site experience ranging from decision making on cost-estimates, type of materials, job planning, interior framing and construction. The program, directed and coordinated through the carpentry shop, is

a half-day, sequential three-year vocational skills training offering. 50% of the carpentry seniors are currently on paid cooperative education sites. To date this program has served 90 carpentry students, renovated 4 structures providing 7 family units and is currently (Fiscal Year 1981) completing restoration of two structures within the low income target community. Approximately 70% of the first year students remained with the project as 11th graders or seniors.

(iv) The Satellite Program at Whittier Regional Vocational School provided alternative vocational education through on-the-job experience in the building trades for youthful offenders, emotionally disturbed and other students in need of special support services. This outstanding program has experienced a retention rate of 75%, and a placement record of 90%.

e. persons of limited English proficiency

(i) In Fiscal Year 1980, the Holyoke Public Schools Feeder Program for special needs students recruited and served 51 handicapped and limited English proficiency 9th grade students. All students received counseling, individual remediation and skills training for 2 1/2 hours on a daily basis within Dean Vocational Technical High School's full range of Vocational Education shops. This project was implemented to address the issue of severe underrepresentation of target population youth receiving vocational education training within the Holyoke Public School system. The retention rate of students within the program exceeded 90%. As a result of this project, which provided students with skills training within seven shop programs for five weeks each, 68% of the participants elected to continue as grade 10 students within five occupational education shops. The proposed Fiscal Year 1982 project will serve 60 youths. Skill areas were Electronic Service Technician, Building Maintenance and Repair, Metal Fabrication, Machine Shop, Carpentry, Commercial Food and Auto Mechanics.

(ii) The War on Non-Reading, a remediation program at Tri-County Regional Vocational Technical High School was designed to provide 200 secondary students with a comprehensive remedial reading class. Its intent was to increase reading levels of students in order to upgrade competencies in their vocational training options. Participants were identified through the use of diagnostic reading tests and academic and vocational teacher referrals.

To measure levels of actual improvement throughout the program, the Stanford Achievement Test was administered when applicable. In its initial year, 249 students were served by the program with a comparable number identified to be served during Fiscal Year 1981.

5. Special data on completers and leavers

The national Vocational Education Data System (VEDS) data collection effort in Massachusetts is currently in progress. The VEDS system will include data supplied by local education agencies concerning

students who completed or left Chapter 74 approved programs as of June 30, 1980. The delay in distribution of Chapter 74 Program Completion Report and Completer/Leaver Follow-up Forms is due to a delay in receiving finalized forms from the National Center for Education Statistics (NCES).

II. Use of Evaluation Information to Improve Vocational Education Programs

Program evaluation information was used by school systems to improve vocational education programs and the overall delivery system in the Commonwealth. Chapter 74 evaluations resulted in a report comprising the following components: recommendations, problem areas, and non-compliance issues, all based upon the information gathered and analyzed during on-site evaluation visits. Evaluation reports were submitted to executive leaders at the local level. Findings were reviewed and preliminary steps were taken to implement action plans. In some instances, Team Leaders at the regional level required local staff to submit formal reports accounting for their progress in addressing the recommendations and non-compliance issues contained within the evaluation report. These progress reports demonstrate that the evaluation information was used to improve vocational education programs. On the state level, staff were kept aware of program improvement through annual end of year reports, which were presented to the Board of Education.

During Fiscal Year 1980, routine evaluation activities uncovered difficulties school systems were experiencing in projecting enrollment levels and in funding start-ups. Some school systems had great difficulty in providing realistic enrollment projections especially for women in non-traditional areas and for previously underserved populations (i.e., handicapped, disadvantaged, limited English proficiency and minorities). Program analysis suggested that the Division of Occupational Education should provide technical assistance to schools in elevating actual enrollments to projected levels. Such technical assistance was provided and resulted in improving the schools' enrollment projection capabilities and the recruitment of previously underserved men and women.

Additionally, evaluations indicated that school systems were encountering difficulty in funding start-ups. Consequently, many programs were not started on time because school systems did not feel enough lead time was allowed to receive funds. School systems were hesitant to purchase equipment or retain instructors until money was in hand. This situation led state level staff to restructure the application and funding process, which in turn modified the funding cycle. With more lead time provided by the new funding cycle, vocational education programs were improved.

Two evaluation projects help illustrate how evaluation information was used to improve vocational education programs on the local and state levels. On the local level, for example, the staff at one Massachusetts Vocational Technical High School participating in a comprehensive Chapter 74 audit prepared a document detailing corrective action taken for guidance and counseling, special needs students and Chapter 622>Title IX issues in response to notification of areas of non-compliance and areas requiring improvement. In addition, two issues for further study were referred to the school committee for in-depth review.

In January, 1980 the Division of Occupational Education contracted with a private consulting firm, the American Institutes for Research (AIR), to develop and implement a management system for the evaluation of occupational programs in the Boston Public Schools. The Boston evaluation was intended to obtain comprehensive, system-wide information concerning the implementation and functioning of occupational programs. The findings of the system-wide evaluation of high school and middle school occupational programs were

reported in terms of compliance and program quality. The Division intended that the results of the evaluation be translated into constructive action for the purpose of improving occupational programs. That concern for constructive action was translated into recommendations which were grouped under four areas: 1) scope of occupational education programs, 2) equipment, facility and safety issues, 3) management structure and operations, and 4) information system.

The response on the local level to these recommendations resulted in the form of an Action Plan that included the following elements: a) the action, b) the methodology, c) the timeline, and d) the scope. Furthermore, these recommendations were studied, discussed and addressed at the central staff level.

The Boston evaluation was noteworthy in several aspects. First, on-site evaluations were conducted not only by AIR staff, but also by evaluation teams consisting of state agency personnel, and instructors and specialists in vocational education from institutions outside the school system. State agency personnel included specialists from several divisions within the State Department of Education: Special Education, Bilingual Education, Occupational Education, and Equal Educational Opportunity. An informal network for sharing the evaluation findings was established by involving the local, regional and state staff. The exchange of information on an informal basis between these staffs was expected to improve occupational programming.

Second, the Boston evaluation provided an opportunity to examine the utility of evaluating all local, state and Federal occupational programs with a single set of evaluation instruments. The results of this process affected evaluation policy and improved occupational programming.

Third, through the Boston evaluation effort, a process for the evaluation of all local, state and Federal occupational programs was developed. One aspect of this process included the establishment of a comprehensive data base against which progress toward achieving occupational education goals could be systematically reviewed.

The Boston evaluation process provided an impetus and suggested directions for improving occupational programs. Currently, both evaluation instruments and the evaluation process are under discussion and development in response to a need for systematic and uniform evaluation throughout the Commonwealth. These evaluation efforts will improve the occupational education delivery system in Massachusetts, and thereby benefit present and future student populations and the larger society that will employ them.



APPENDIX C

AGRICULTURAL VOCATIONAL EDUCATION



Dollar for dollar

Additional investment in agriculture can bring higher Returns than industry

By simply overlooking an investment in an industry at hand which can return \$1.30 for every dollar invested, Americans are shortchanging themselves, according to two University of Georgia agricultural economists. But what is this neglected—but potentially fruitful—industry investment? Agriculture, that's what.

Drs. Bill R. Miller and Fred C. White, economists with the College of Agriculture at the University of Georgia, recently suggested that agriculture is now an underdeveloped sector of the U. S. economy. And although many other economists theorize that industrialization brings the greatest return for dollars invested, Miller and White find that agriculture has been overlooked as an industry which can bring as great or greater returns for each dollar invested.

They agree that in the allocation of capital expenditure, economic efficiency requires that every dollar invested bring the greatest return of national income both now and in the future. But they disagree with the historical economic view that agriculture effects marginal returns and is closely associated with low-growth regions of the nation.

The same interconnected relationships of agriculture which hide the economic contributions of agriculture to the economy, they argue, multiply the effects of agriculture on personal income. In a recent paper, the agricultural economists showed that "because of these interrelationships, the increase in value added by agriculture is probably more important than value added in other basic industries." They base their opinion

on the interdependence that has been created between agriculture, basic industry and service industry.

This interdependence between agriculture and industry is clearly illustrated by the dependence of certain service industries on agriculture. The authors emphasized that agricultural purchases, which contribute directly to the regional economy, are in service industries—the local petroleum wholesaler, fertilizer dealer, and farm supply store. It is this simple, but indirect, input of agriculture to the national economy which has often been overlooked or discounted in recent economic theory, Miller and White contend. Using sample averages in their study, the authors found that each one million dollars in farm input purchases directly increased service employment by 106 jobs.

Miller and White developed a model to illustrate the impact of capital investment in agriculture based on a factor called a "personal income multiplier." This multiplier simply reflects a one dollar change in value added for a selected industry—in this case either in manufacturing or in agriculture.

Overall, they found that the dollar value added to agriculture would bring greater capital gains than a dollar value added to manufacturing nationwide to a greater or lesser degree. In Georgia, for example, the personal income multiplier comparison between agriculture and manufacturing was 1.1599 and 0.4027, respectively. This means that each added one dollar invested in Georgia agriculture would effect an increase in personal income of about \$1.16, while an increase of only 40¢ would come from the same one dollar value added to manufacturing.

In only six states—primarily rural western states—did the dollar in value added to manufacturing bring a greater hypothetical return than the same dollar value added to agriculture. They explain this result by noting that an increase in value added to an already extremely rural economy (Wyoming's, for example), would not have as large an effect as an equal increase in manufacturing value added.

When the economists struck the average of the 48 contiguous state's personal income multipliers, they found that agriculture averaged a \$1.30 return for each one dollar invested.



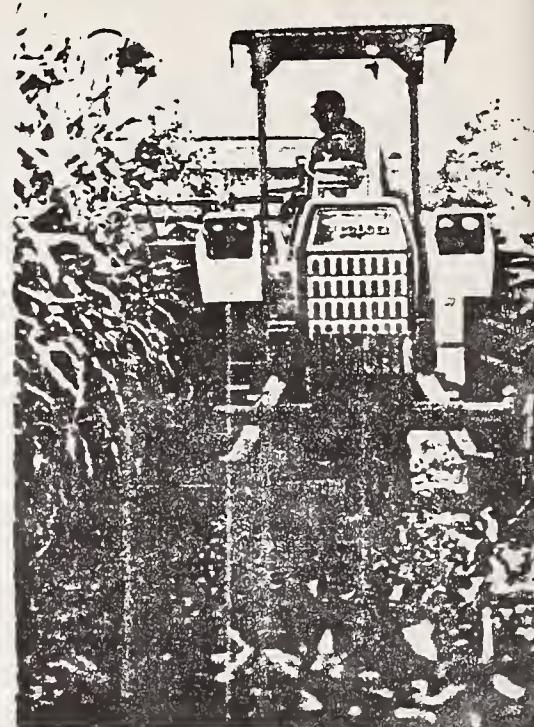
Georgia ag economists Fred White (l) and Bill Miller suggest that agriculture is now America's underdeveloped industry.

The authors conclude by suggesting that, at this time, the United States is over-industrialized and under-developed in agriculture. The number of backward and forward linkages (the interrelationships between basic and service industries and agriculture) is so great that a one dollar increase in the value added in agriculture generally is more important in increasing personal income than a one dollar increase in value added in other basic industry.

The policy implications of this conclusion are significant. Not only would the general level of personal income be enhanced by increased emphasis on investment in agricultural output, but food prices could fall. And, because of important linkage and multiplier effects, employment could rise.

"It would be inconsistent and unwise," Miller and White determined, "to follow policies that encourage industrial expansion when the relative payoff is higher for agricultural expansion based on the encouragement of greater production of agricultural raw materials."

The table below illustrates the impact of capital investment based on a factor Miller and White term a "personal income multiplier." A one dollar capital investment added in Georgia agriculture, for example, would theoretically bring a \$1.1599 return while the same dollar added to Georgia manufacturing would return only \$0.4027.



Georgia's economy would benefit more from a dollar added to agriculture than a dollar added to industry according to a recent study by two College Station ag economists.

State	Multipliers		State	Multipliers	
	Agriculture	Manufacturing		Agriculture	Manufacturing
Alabama	1.1674	0.4489	Nebraska	1.0595	0.9016
Arizona	1.1352	0.7183	Nevada	1.0688	1.5792
Arkansas	1.1189	0.4834	New Hampshire	1.2542	0.4737
California	1.1902	0.4250	New Jersey	1.0637	0.5119
Colorado	1.0608	0.8160	New Mexico	1.1228	0.9704
Connecticut	1.2619	0.5206	New York	1.1136	0.3723
Delaware	1.2745	1.3192	North Carolina	1.1962	0.2680
Florida	1.2614	0.5366	North Dakota	0.9969	1.3839
Georgia	1.1599	0.4027	Ohio	1.0547	0.3886
Idaho	1.0844	0.6349	Oklahoma	0.9064	0.6375
Illinois	0.9690	0.4126	Oregon	1.0724	0.6273
Indiana	1.0196	0.4382	Pennsylvania	1.1949	0.3683
Iowa	1.0249	0.5407	Rhode Island	0.9176	0.7295
Kansas	0.9187	0.6245	South Carolina	1.1236	0.3580
Kentucky	1.0711	0.4555	South Dakota	0.9844	1.1722
Louisiana	1.0876	0.6012	Tennessee	1.0061	0.3957
Maine	1.2985	0.4683	Texas	0.9818	0.4374
Maryland	1.1533	0.6594	Utah	1.1130	1.0535
Massachusetts	1.0815	0.4686	Vermont	1.2037	0.5164
Michigan	1.1130	0.5559	Virginia	1.1129	0.4028
Minnesota	1.1242	0.5717	Washington	1.1575	0.6264
Mississippi	1.0525	0.3995	West Virginia	0.8734	0.5461
Missouri	0.9692	0.5106	Wisconsin	1.1609	0.4439
Montana	1.0399	1.5181	Wyoming	0.7783	1.2373

MEETING EMPLOYMENT NEEDS IN AGRICULTURE AND
AGRIBUSINESS IN MASSACHUSETTS - 1977 SUMMARY*

1. Total employment, all industries - 1975	2,345,800
2. Total employment - food, fiber, and agribusiness sector, 1975	unavailable
3. Total number of full-time workers using agricultural/agribusiness competencies in their primary occupation, 1975	60,429
4. Number of new workers needed annually as replacements (8.2% of item 3)**	4,955
5. Number of students graduating/completing programs in agriculture/agribusiness in 1976-77:	
A. From secondary schools (vocational programs)	336
B. From 2-year postsecondary institutions	419
C. From the College of Food & Natural Resources, UMass	625
D. Total: (A) + (B) + (C)	<u>1,380</u>
6. Estimated number of graduates entering employment in agriculture/agribusiness occupation, including continuing education - 1977:	
A. Secondary schools (55%, estimated from official data, 1973-74)	185
B. Postsecondary institutions (70%, estimated from official data, 1973-74)	293
C. Higher education (baccalaureate and above; estimated at 75%)	469
D. Total: (A) + (B) + (C)	<u>947</u>
7. Percentage of employment opportunities in agriculture/agribusiness which are being met by individuals educationally prepared in these occupations (item 6 ÷ item 4)	19.1%
8. Percentage of total employment with workers using agriculture/agribusiness competencies (item 3 ÷ item 1)	2.6%

* Compiled by William L. Thuemmel, Associate Professor and Head, Agricultural Education, University of Massachusetts, Amherst. Employment data for 1975 were projected from 1970 U.S. census as developed by U.S. Interdepartmental Committee on Employment Opportunities in Agriculture and Agribusiness. Student data were obtained by the compiler via telephonic survey during December 1977.

** CONCLUSION: These data indicate that at least a five-fold expansion of occupational education programs in agriculture is needed just to maintain a skilled agricultural work force in Massachusetts at its current level.

SCOPE OF AGRICULTURAL EDUCATION (FORMAL) IN MASSACHUSETTS - 1977 SUMMARY*

I. SECONDARY LEVEL

A. Approved Programs in Vocational Agriculture

<u>High Schools with Approved Programs</u>	<u>Program Enrollees 1976-77</u>	<u>Program Completions (Graduates) 1976-77</u>	<u>Program Enrollees 1977-78</u>	<u>Instructional (Ag.) Faculty Employed 1977-78</u>
Bristol County Agricultural	328	71	322	14
Essex Agricultural & Technical Institute	348	67	375	16
Norfolk County Agricultural	329	70	359	15
Smith's Vocational & Agricultural	67	20	69	4
Burncoat Senior	86	16	92	2
Martha's Vineyard Regional	38	9	35	1
Monument Mountain Regional	30	6	22	2
Wachusett Regional	71	8	91	3
West Roxbury	8	2	11	1
Assabet Valley Regional Vocational	122	21	147	5
Baypath Regional Vocational Technical	53	13	60	3
Cape Cod Regional Vocational Technical	24	7	27	2
Franklin County Technical	50	7	51	3
Pathfinder Regional Vocational Technical	40	1	50	2
Minuteman Regional Vocational Technical	45	8	50	4
Northeast Metro Regional Vocational	43	-	72	4
Silver Lake Regional Vocational	14	-	11	1
	64	10	80	2
Total (18)	1,760	336	1,924	84

* Compiled by William L. Thuemmel, Associate Professor and Head, Agricultural Education, University of Massachusetts, Amherst. All data were obtained by the compiler via telephonic survey during December 1977.

	Program Enrollees 1976-77	Program Completions (Graduates) 1976-77	Program Enrollees 1977-78	Instructional (Ag.) Faculty Employed 1977-78
B. Special (General/Avocational) Agricultural Programs				
Granby Junior-Senior High School	-	-	9	1
Leominster High School	50	-	50	1
Lunenburg High School	-	-	28	2
Rockport High School	135	- (work 35s study)	135	3
Turners Falls High School	270		350	1
Total (5)	455	35	572	8
II. POSTSECONDARY PROGRAMS IN AGRICULTURE				
<u>Institutions with Programs</u>				
Essex Agricultural & Technical Institute	478	127	439	23
Massachusetts Bay Community College	36	-	51	6
Springfield Technical Community College	68	23	66	5
Stockbridge School of Agriculture, UMass	569	269	532	60**
Total (4)	1,151	419	1,088	94
III. HIGHER EDUCATION PROGRAMS IN AGRICULTURE				
College of Food & Natural Resources, UMass (minus Home Economics & Hotel, Restaurant, & Travel Admin. majors)	2,696	625	2,679	(FTEs) 130**
Agricultural Education (Teacher Preparation/Certification Program), School of Education, UMass	60	19	(fall semester 38 only)	1

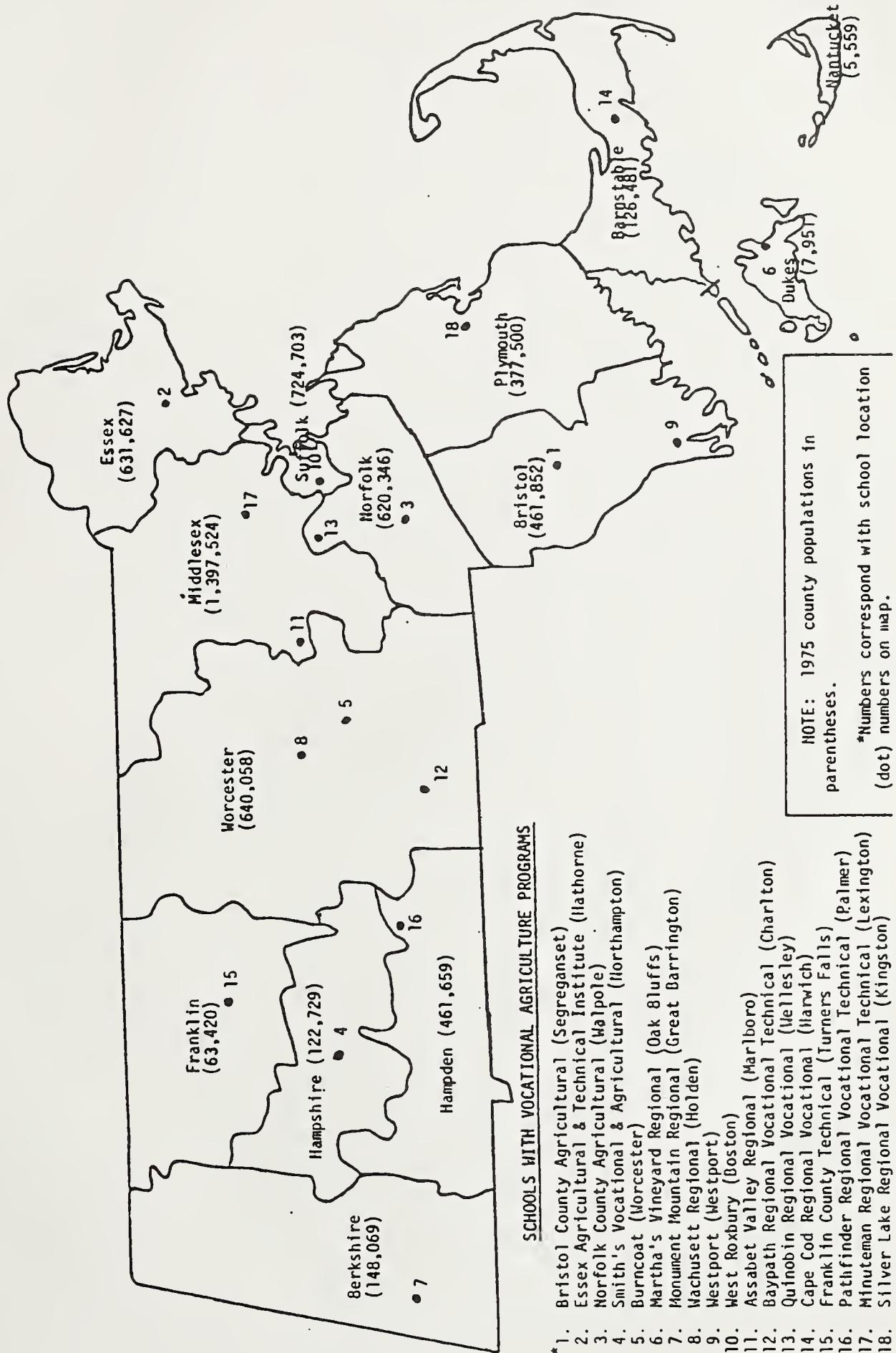
** Of the total, 43 faculty members teach courses in both the Stockbridge School of Agriculture and the College of Food and Natural Resources.

IV. ADULT PROGRAMS (EVENING PRACTICAL ARTS) IN AGRICULTURE

<u>Institutions with Programs</u>	<u>Enrollments Fall Semester 1977</u>
Essex Agricultural & Technical Institute	500 (estimated)
Norfolk County Agricultural High School	340
Smith's Vocational & Agricultural High School	17
Wachusetts Regional High School	15
Total (4)	872

V. SUMMARY OF VOCATIONAL, TECHNICAL, AND PROFESSIONAL PROGRAMS (GEN./AVOC./ADULT EXCLUDED)

<u>Kind/Educational Level of Agricultural Program</u>	<u>Program Enrollees 1976-77</u>	<u>Program Completions (Graduates) 1976-77</u>	<u>Program Enrollees 1977-78</u>	<u>Instructional (Ag.) Faculty Employed 1977-78</u>
Secondary Vocational	1,760	336	1,924	84
Postsecondary	1,151	419	1,088	94
High Education	2,696	625	2,679	181
Total	5,607	1,380	5,691	265



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